



**FOR OFFICIAL USE ONLY**

(For consideration by the Board on or about 27 September 2018)

R103-18  
6 September 2018

Proposed Loan  
East–West Highway (Khevi–Ubisa Section)  
Improvement Project  
(Georgia)

1. The Report and Recommendation of the President (RRP: GEO 49257-001) on the proposed loan to Georgia for the East–West Highway (Khevi–Ubisa Section) Improvement Project is circulated herewith.
2. This Report and Recommendation should be read with *Country Operations Business Plan: Georgia, 2018–2020*, which was circulated to the Board on 27 September 2017 (DOC.IN.373-17).

For Inquiries: Valerie Lisack, Central and West Asia Department  
(Ext. 5026)  
Patricia Rhee, Office of the General Counsel  
(Ext. 1508)



# Report and Recommendation of the President to the Board of Directors

---

Project Number: 49257-001  
September 2018

## Proposed Loan Georgia: East–West Highway (Khevi–Ubisa Section) Improvement Project

Distribution of this document is restricted until it has been approved by the Board of Directors. Following such approval, ADB will disclose the document to the public in accordance with ADB's Public Communications Policy 2011.

**Asian Development Bank**

## **CURRENCY EQUIVALENTS**

(as of 23 August 2018)

Currency unit	–	lari (GEL)
GEL1.00	=	\$0.3868
\$1.00	=	GEL2.5850

## **ABBREVIATIONS**

ADB	–	Asian Development Bank
BOQ	–	bill of quantities
CAREC	–	Central Asia Regional Economic Cooperation
EIB	–	European Investment Bank
EIRR	–	economic internal rate of return
ETCIC	–	Eurasian Transport Corridor Investment Center
EWB	–	East–West Highway
GDP	–	gross domestic product
JICA	–	Japan International Cooperation Agency
km	–	kilometer
m	–	meter
MFF	–	multitranchise financing facility
MRDI	–	Ministry of Regional Development and Infrastructure
O&M	–	operations and maintenance
PAM	–	project administration manual
TA	–	technical assistance
vpd	–	vehicles per day

## **NOTE**

In this report, “\$” refers to United States dollars.

<b>Vice-President</b>	Wencai Zhang, Operations 1
<b>Director General</b>	Werner Liepach, Central and West Asia Department (CWRD)
<b>Director</b>	Dong Soo Pyo, Transport and Communications Division, CWRD
<b>Team leader</b>	Valerie Lisack, Senior Transport Specialist, CWRD
<b>Team members</b>	Michael Beauchamp, Senior Social Development Specialist (Safeguards), CWRD
	Nancy Bustamante, Senior Operations Assistant, CWRD
	Didier Guynet, Senior Procurement Specialist, Procurement, Portfolio and Financial Management Department
	Ari Kalliokoski, Transport Economist, CWRD
	Soo-Wan Kim, Senior Audit Specialist, Office of the Auditor General
	George Kiziria, Senior Project Officer (Infrastructure), CWRD
	Duncan Lang, Environment Specialist, CWRD
	George Luarsabishvili, Economics Officer, CWRD
	Maureen Mamayson, Project Analyst, CWRD
	Saad Paracha, Financing Partnerships Specialist, Office of Cofinancing Operations
	Patricia Rhee, Senior Counsel, Office of the General Counsel
	Nathan Rive, Climate Change Specialist, CWRD
	Mary Alice Rosero, Social Development Specialist (Gender and Development), CWRD
	Krisanta Carissa Vila, Senior Operations Assistant, CWRD
<b>Peer reviewer</b>	Yasushi Tanaka, Principal Transport Specialist, Southeast Asia Department

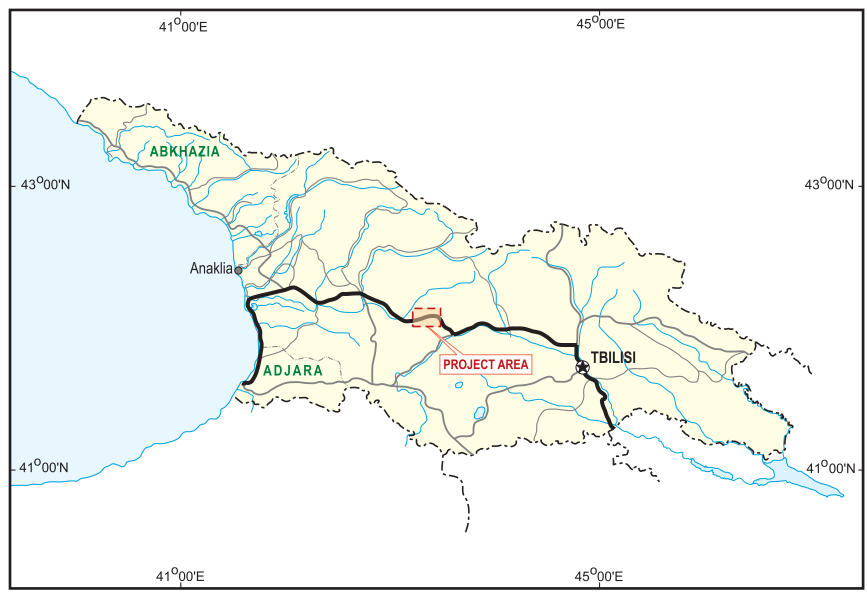
In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

## CONTENTS

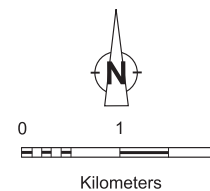
	Page
PROJECT AT A GLANCE	
MAP	
I. THE PROPOSAL	1
II. THE PROJECT	1
A. Rationale	1
B. Impact and Outcome	4
C. Outputs	4
D. Summary Cost Estimates and Financing Plan	5
E. Implementation Arrangements	6
III. DUE DILIGENCE	7
A. Technical	7
B. Economic and Financial	7
C. Governance	8
D. Poverty, Social, and Gender	9
E. Safeguards	9
F. Summary of Risk Assessment and Risk Management Plan	10
IV. ASSURANCES AND CONDITIONS	11
V. RECOMMENDATION	11
APPENDIXES	
1. Design and Monitoring Framework	12
2. List of Linked Documents	14

## PROJECT AT A GLANCE

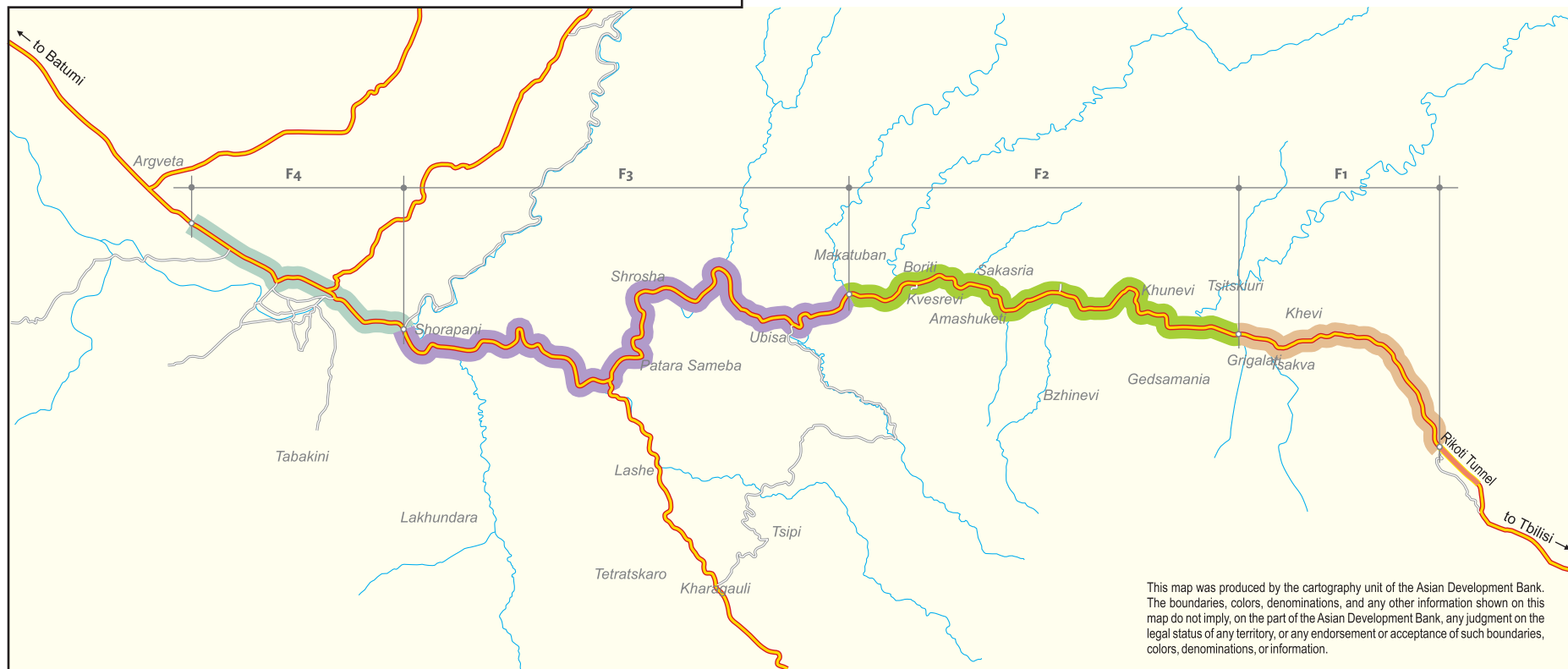
1. Basic Data		Project Number: 49257-001	
Project Name	East-West Highway (Khevi-Ubisa Section) Improvement Project	Department /Division	CWRD/CWTC
Country	Georgia	Executing Agency	Ministry of Regional Development and Infrastructure of Georgia
Borrower	Georgia		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Transport	Road transport (non-urban)		300.00
		Total	300.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Climate Change impact on the Project	Medium
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns	ADB Financing	
Regional integration (RCI)	Pillar 2: Trade and investment	Adaptation (\$ million)	8.00
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD)	Institutional development	Effective gender mainstreaming (EGM)	✓
Partnerships (PAR)	Bilateral institutions (not client government)		
	International finance institutions (IFI)		
	Official cofinancing		
5. Poverty and SDG Targeting		Location Impact	
Geographic Targeting	No	Regional	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG9		
6. Risk Categorization:	Complex		
7. Safeguard Categorization	Environment: A Involuntary Resettlement: A Indigenous Peoples: C		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		300.00	
Sovereign Project (Regular Loan): Ordinary capital resources		300.00	
Cofinancing		0.00	
None		0.00	
Counterpart		129.53	
Government		129.53	
Total		429.53	
Note: World Bank's cofinancing for F1 (\$140 million), on a parallel collaborative basis, was confirmed. ADB has also been closely working with the European Investment Bank and JICA, who are financing F3 and F4, respectively. This collaboration will be formally captured through an exchange of letter or similar document, once their respective Boards approve the funding.			



# GEORGIA EAST-WEST HIGHWAY (KHEVI-UBISA SECTION) IMPROVEMENT PROJECT



- |  |                  |                                               |                              |
|--|------------------|-----------------------------------------------|------------------------------|
|  | National Capital |                                               | East-West Corridor           |
|  | Project Road F2  |                                               | Other Road                   |
|  | Section F1       |                                               | River                        |
|  | Section F3       |                                               | Autonomous Republic Boundary |
|  | Section F4       |                                               | International Boundary       |
|  | National Road    | Boundaries are not necessarily authoritative. |                              |



This map was produced by the cartography unit of the Asian Development Bank. The boundaries, colors, denominations, and any other information shown on this map do not imply, on the part of the Asian Development Bank, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries, colors, denominations, or information.

## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to Georgia for the East–West Highway (Khevi–Ubisa Section) Improvement Project.

2. The project will construct 12 kilometers (km) of new access-controlled dual two-lane carriageway road or a four-lane divided highway, partly on a new alignment, on the East–West Highway (EWH) between Khevi and Ubisa, which is part of Corridor 2 of the Central Asia Regional Economic Cooperation (CAREC) program. The project will include a capacity development program to develop an effective road safety program and enhance the government's capacity in road operation and maintenance (O&M) of the EWH corridor, which will include several major bridges and tunnels after completion, requiring a new O&M approach.

## II. THE PROJECT

### A. Rationale

3. **Country's strategic location.** Located at the crossroads of Central West Asia and Eastern Europe and bounded to the west by the Black Sea, Georgia has historically been a trade center. It played a key role in the movement of peoples and goods from the Russian Federation in the north to Armenia, Azerbaijan, and Turkey and onwards to Iran in the south, and from Europe in the west to Asia in the east. After Georgia's admission to CAREC in 2016, the EWH has been an integral part of one of the six key CAREC corridors providing the shortest transit link connecting Central Asia with Europe and East Asia. Since the mid-2000s, Georgia has significantly developed its transport system, infrastructure, and service delivery through the construction of roads, railways, port terminals, and airports. Following its Georgia 2020 socioeconomic development strategy, the government is committed to develop the country as a regional transport and logistics hub for trade<sup>1</sup> between Europe and Central Asia and even East Asia. The project fits with the Midterm Review of Strategy 2020 of the Asian Development Bank (ADB).<sup>2</sup> It is consistent with the strategic objectives of ADB's country partnership strategy for Georgia, 2014–2018 and is included in ADB's country operations business plan for Georgia, 2018–2020.<sup>3</sup>

4. **Regional transport corridor and road network.** The road network in Georgia extends to approximately 22,000 km with 6,835 km of international and secondary roads managed by the Roads Department under the Ministry of Regional Development and Infrastructure (MRDI) and about 15,000 km of local roads managed by district administrations. The main highway network comprises the East–West and the North–South corridors. The EWH, stretching over 410 km from Sarpi on the Black Sea, at the border with Turkey, through the center of the country to the capital Tbilisi and on to the border with Azerbaijan, is a top priority of the Government's transport infrastructure development. The EWH represents about 2% of Georgia's road network length, one fourth of its international road network and carries over 60% of the country's foreign trade. The EWH serves 13,000 vehicles per day (vpd) on average, with a traffic growth rate of over 10% per annum since 2005. The EWH is not only crucial for the connectivity of international trade between the Caspian Sea and the Black Sea, but also essential for Georgia's global market access and socioeconomic development. Developing the EWH is also of great significance to the landlocked countries of Central Asia and will have an important regional impact.

---

<sup>1</sup> Government of Georgia. 2014. *Socio-economic Development Strategy of Georgia, "Georgia 2020"*. Tbilisi.

<sup>2</sup> ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

<sup>3</sup> ADB. 2014. *Country Partnership Strategy: Georgia, 2014–2018*. Manila; and ADB. 2017. *Country Operations Business Plan: Georgia, 2018–2020*. Manila.



5. **ADB assistance.** In 2009, ADB approved a \$500 million multitranche financing facility (MFF) for the Road Corridor Investment Program to assist the government in upgrading two key sections of the EWH.<sup>4</sup> The tranche 1 project (\$118.8 million, approved in 2009) was to construct a new 28 km two-lane bypass road skirting Kobuleti. The tranche 2 project (\$150 million, approved in 2010) was to construct a new 14 km two-lane bypass road skirting Batumi. An updated cost estimate, prepared in 2011 as part of the detailed design, exceeded the original cost estimate, which had been based on the preliminary design. In November 2011, the government requested additional financing of \$140 million through a tranche 3 project to make up for the shortage of financing<sup>5</sup> the Kobuleti bypass (tranche 1) and simultaneously canceled tranche 2. The Kobuleti bypass is now complete and the road opened to traffic in June 2018. In 2017, ADB approved a \$114 million loan, with another \$114 million of cofinancing provided by the Asian Infrastructure Investment Bank, to construct the Batumi bypass.<sup>6</sup> The civil works are ongoing. In 2017, ADB approved an \$80 million loan to construct the Dzirula–Kharagauli–Moliti road in Central Georgia to a two-lane all-weather standard, which improves connectivity to remote poor areas.<sup>7</sup> This secondary road runs parallel to the EWH and connects Kharagauli to the EWH. The civil works contract for the first section has been awarded and procurement for the second section is ongoing. The reconstruction of the Kvesheti–Kobi section of the North–South corridor is included in ADB’s country operations business plan and project preparation is ongoing. This project, together with other projects in the pipeline (Tbilisi bypass, and Batumi–Sarpi), will support the government’s objective to complete the main road network.

6. **Value added by ADB assistance.** The project will provide a study to ensure that a proper and effective maintenance strategy adapted to a high-level service highway corridor with multiple complex structures is implemented. Further, a climate risk vulnerability assessment was carried out under ADB’s technical assistance (TA) for 9211-GEO. The design recommendations arising from the climate risk vulnerability assessment were mostly incorporated into the detailed design. Both measures, which intend to increase the sustainability of the investment, would not have been incorporated without ADB support.

7. **Development coordination.** Georgia has been successful in mobilizing financing from other development partners including the World Bank, the European Investment Bank (EIB), the Japan International Cooperation Agency (JICA), the European Bank for Reconstruction and Development, and the Kuwait Fund for Arab Economic Development. Major development partners have committed to financing the remaining last section of the EWH. The five subsections are defined as F0, F1, F2, F3, and F4 in the project’s feasibility study. The World Bank and EIB are financing subsections F0 and F1. ADB has financed the detailed design for subsections F2, F3, and F4 through an MFF (footnote 4), while financing for implementing subsection F2 is being provided by ADB, subsection F3 by the EIB, and subsection F4 by JICA. Although each partner will be responsible for the respective sections in parallel, they will coordinate to the extent possible and as required to ensure smooth implementation.

---

<sup>4</sup> ADB. 2009. Report and Recommendation of the President to the Board of Directors: *Proposed Multitranche Financing Facility to Georgia for the Road Corridor Investment Program*. Manila.

<sup>5</sup> The updated cost estimate increased substantially due to (i) alignment changes made to avoid significant resettlement impacts, which resulted in additional tunnels and bridges; and (ii) increased global commodity prices, which led to considerable increases in the cost of construction materials.

<sup>6</sup> ADB. 2017. Report and Recommendation of the President to the Board of Directors: *Proposed Loan and Administration of Loan Georgia: Batumi Bypass Road Project*. Manila.

<sup>7</sup> ADB. 2017. Report and Recommendation of the President to the Board of Directors. *Proposed Loan Georgia: Secondary Road Improvement Project*. Manila.

8. **Necessity of the road.** At the end of 2017, 40% of the EWH had already been completed: about 170 km had been upgraded and 110 km were under construction. One important missing link is the 53 km section (covering subsections from F1 to F4) between Chumateleti and Argveta. Improvements are either completed or underway on each side of this section. Because of difficult and unstable terrain, the project road (subsection F2 – Khevi–Ubisa Section) remained untouched. The existing two-lane road is a mountainous winding road prone to landslides. Cars, buses, and trucks need to reduce their speed by 20%–25% when traveling on this stretch of the road. The heavy transit traffic also poses environmental and safety problems for the local population and tourists using the road. Preliminary impact studies on completed sections of the EWH found that the vehicle operating costs of cars were reduced by 15% and of trucks by 6.6%, and transit time was reduced by 32%. Fatalities from road crashes were 43% less. Given that 75% of the project road length will be located either on a bridge or in a tunnel because of the challenging terrain, pedestrians are not expected to use the road and there is no space for small-scale businesses on the roadside, which will improve road safety significantly. To minimize the overall cost of transport and logistics, all bottlenecks constraining traffic capacity on the EWH need to be mitigated. The completed EWH will be an essential link both at national and regional levels. Moreover, a World Bank study<sup>8</sup> shows other impacts as well, including a reduction in transportation costs after corridor improvements, which will be more beneficial for the rural population who are more reliant on transportation and sensitive to price changes. However, the financial viability is not strong enough to attract private sector funds for financing and operation of the road, given the high investment costs of the project. So far, the government has constructed and operated the highway network through public sector funding without tolling.

9. **Road safety.** Institutional development of the transport sector is essential to a competitive corridor development. Some positive developments in road safety have occurred in the past decade, with road fatalities rate declining from 20 fatalities per 100,000 persons in 2008 to 13 fatalities in 2015. This remains four times higher than the best performers in the European Union.<sup>9</sup> Road crashes cost Georgia about 1%–2% of its gross domestic product (GDP), and about 20% of all road crashes happen on the EWH. The government approved a new National Road Safety Strategy in July 2016, prepared through World Bank financing. Following this approval, an interagency road safety commission was established. ADB assistance will support initiatives of the strategy during next few years by helping Georgia address road safety issues during the extensive period of construction activities on the EWH, including rehabilitation of the parallel secondary road.

10. **Preservation of road assets.** Since 2005, the government has revised rules and regulations to respond to transport needs. This has helped attract private capital to aviation, maritime services, pipelines, and railways. The road sector remains owned and operated by the public sector. The government's public expenditure has increased by 13% annually to meet the needs of EWH improvement. Yet the budget allocations for road maintenance received only 6% increase annually. Nevertheless, the Roads Department has made good progress in resolving its current maintenance backlog in the last five years and has prepared a 5-year plan (2018–2022) to address most of the network needs. Establishing a reliable funding mechanism is a key challenge, to allow timely and regular road maintenance, and to ensure road asset sustainability. Components targeting this concern were included in each on-going ADB assistance such as the implementation of performance-based maintenance (PBM) contracts aimed at improving the efficiency of the maintenance budget. The PBM component is building on a successful WB pilot

<sup>8</sup> World Bank. 2015. *Georgia: Assessing Economy Wide Indirect Impacts of East–West Highway Corridor Investments through CGE Modelling*. Washington, DC.

<sup>9</sup> World Health Organization. 2015. *The Global Status Report on Road Safety 2015*, Geneva.

program currently under implementation, comprising 5 years contracts. The project will address this challenge by supporting the Roads Department to develop an O&M system of the highways in Georgia, including the EWH corridor. Dialogue with the government, in liaison with other financiers of the corridor, will be pursued to provide broad support to the government.

11. **Project management.** The Roads Department's technical and managerial capacity is key to ensure the successful implementation of the project considering the project's technical complexity, and the growing road investment program. The Roads Department's capacity is already stretched and it needs to be further strengthened to conduct day-to-day management of the project from a technical point of view. In particular, the level of relevant technical experience needs to be improved in project management, bridge, tunnel, and geotechnical engineering.

12. **Lessons.** The capacity for managing land acquisition and resettlement has seen major improvements, demonstrated in the implementation of the Batumi bypass and the Secondary Road Improvement projects (footnotes 6 and 7). However, a small number of affected people may decline relocation, which may result in lengthy disputes outside of the grievance redress mechanism, and thereby disrupt construction works. This has been addressed during project preparation by consultations with nongovernment organizations and local residents to explain the legal framework allowing involuntary land acquisition and expropriation for public purposes; this will continue during project implementation. The Roads Department will also closely coordinate with law enforcement agencies to avoid indefinite grievance cases that affect construction works. Executing agencies in the region, including the Roads Department in Georgia, have recently experienced several cases where the lowest bid prices for civil works were abnormally low compared to cost estimates. This raises concerns in respect of the bidder's ability to perform the contract successfully. To mitigate this risk, the new ADB Procurement Policy – Goods, Works, Nonconsulting and Consulting Services (2017 as amended from time to time) and the Procurement Regulations for ADB Borrowers – Goods, Works, Nonconsulting and Consulting Services (2017 as amended from time to time) will apply for the project. New regulations provide a mechanism to exclude an abnormally low bid or make it subject to certain conditions.

## **B. Impact and Outcome**

13. The project is aligned with the following impact: Georgia is a regional and logistics hub and more attractive for businesses (footnote 1). The project will have the following outcome: efficiency and safety of road transport along the EWH improved.

## **C. Outputs**

14. **Output 1: 12-kilometer section of East–West Highway between Khevi and Ubisa constructed.** The highway section will be access controlled dual carriageway or a four-lane divided highway, partly on a new alignment.

15. **Output 2: Road safety awareness increased.** A road safety program for highways, with gender-inclusive provisions, will be developed and implemented.

16. **Output 3: Capacity of Roads Department for operation and maintenance and project management improved.** Under a capacity strengthening program developed by teams of consultants, (i) the existing O&M system of highways will be reviewed and strengthened, and (ii) training on project management for the Roads Department staff will be provided, including mainstreaming gender into these activities.

## D. Summary Cost Estimates and Financing Plan

17. The project is estimated to cost \$429.5 million (Table 1).

18. Detailed cost estimates by expenditure category and by financier are included in the project administration manual (PAM).<sup>10</sup> The major expenditures items include civil works and consultancy services.

**Table 1: Summary Cost Estimates**  
(\$ million)

Items	Amount <sup>a</sup>
<b>A. Base Costs<sup>b</sup></b>	
1. Output 1: 12 km section of EWH between Khevi and Ubisa constructed	348.1
2. Output 2: Strengthening of institutional capacity	1.4
3. Social mitigation <sup>c</sup>	4.3
4. Construction supervision consultants	11.0
5. Project management support	1.0
<b>Subtotal (A)</b>	<b>365.7</b>
<b>B. Contingencies<sup>d</sup></b>	
1. Physical	26.2
2. Price	15.0
<b>Subtotal (B)</b>	<b>41.2</b>
<b>C. Financing Charges During Implementation<sup>e</sup></b>	<b>22.6</b>
<b>Total (A+B+C)</b>	<b>429.5</b>

km = kilometer.

<sup>a</sup> Includes taxes and duties of \$55.0 million to be financed by the government. Such amount does not represent an excessive share of the project cost.

<sup>b</sup> In May 2018 prices.

<sup>c</sup> The estimated cost is for land acquisition and resettlement.

<sup>d</sup> Physical contingencies computed at 7.5% for civil works. Price contingencies computed at average of 1.5% on foreign exchange costs and at average of 3.1% on local currency costs based on projected annual rates over the project's implementation period.

<sup>e</sup> Includes interest and commitment charges. Interest during construction for the ordinary capital resources loan has been computed at the 6-month London Interbank offered rate plus an effective contractual spread of 0.5% and maturity premium of 0.2%. Commitment charges for the ordinary capital resources loan are 0.15% per year to be charged on the undisbursed loan amount.

Source: Asian Development Bank estimates.

19. The government has requested a regular loan of €255,297,000 (\$300.0 million)<sup>11</sup> from ADB's ordinary capital resources to help finance the project. The loan will have a 26-year term, including a grace period of 11 years; an annual interest rate determined in accordance with ADB's regular lending facility; a commitment charge of 0.15% per year (the interest and other charges during construction to be capitalized in the loan); and such other terms and conditions set forth in the draft loan agreement. Based on the straight-line method, the average loan maturity is 18.75 years, and the maturity premium payable to ADB is 0.20% per year. The government will contribute \$129.5 million to cover taxes, land acquisition, and resettlement costs.<sup>12</sup> ADB will not finance taxes.

20. The summary financing plan is in Table 2. ADB will finance the expenditures in relation to civil works and consultancy services.

<sup>10</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

<sup>11</sup> €0.850991 = \$1.00 as of 12 July 2018. The loan will be denominated in Euros.

<sup>12</sup> World Bank's cofinancing for F1 (\$140 million), on a parallel collaborative basis, was confirmed. ADB has also been closely working with the European Investment Bank and JICA, who are financing F3 and F4, respectively. The collaboration will be formally captured through an exchange of letter or similar document, once their respective Boards approve the funding.

**Table 2: Summary Financing Plan**

<b>Source</b>	<b>Amount (\$ million)</b>	<b>Share of Total (%)</b>
Asian Development Bank		
Ordinary capital resources (regular loan)	300.0	69.8
Government	129.5	30.2
<b>Total</b>	<b>429.5</b>	<b>100.0</b>

Source: Asian Development Bank estimates.

21. Climate adaptation is estimated to cost \$11.5 million. ADB will finance 69.8% of the adaptation costs. The main adaptation measures are (i) reinforcement of bridge structures, (ii) additional slope stabilization, (iii) enhancement of drainage capacity, and (iv) additional tree/shrub planting.<sup>13</sup>

## **E. Implementation Arrangements**

22. The project's executing agency will be the MRDI, which is responsible for planning, designing, and maintaining all international and secondary roads in the country. It is currently the executing agency for the ongoing MFF (footnote 4) and two stand-alone loans (footnotes 6 and 7) and has a sound understanding of ADB policies and procedures. The Roads Department, an agency under the MRDI, will be the implementing agency. The Eurasian Transport Corridor Investment Center (ETCIC) of the MRDI will be assisting the Roads Department with project financial management activities.

23. The procurement of the works and the selection of consultant services will follow the new procurement framework as set out in ADB's Procurement Policy for the procurement of goods, works, consulting services and non-consulting services (2017) as well as the Procurement Regulations for ADB Borrowers (2017).<sup>14</sup> Advance contracting and retroactive financing will be sought to ensure the readiness of the project. The government has been advised that advance contracting and retroactive financing do not commit ADB to finance the project. The project is categorized as a procurement- and design-ready project. The implementation arrangements are summarized in Table 3 and described in detail in the PAM (footnote 10).

**Table 3: Implementation Arrangements**

Aspects	Arrangements		
Implementation period	December 2018–December 2024		
Estimated completion date	30 June 2024		
Estimated loan closing date	31 December 2024		
Management			
(i) Oversight body	Ministry of Finance, Deputy Minister (Chair)		
(ii) Executing agency	Ministry of Regional Development and Infrastructure		
(iii) Implementation agency	Roads Department		
Procurement	Civil works (OCB)	1 contract	\$348.10 million
Consulting services	Construction supervision (QCBS, 80:20)	249 international person-months and 476 national person-months	\$11.00 million
	Road safety program (CQS)	20 national person-months	\$0.10 million
	Road maintenance sustainability strategy (QCBS, 90:10)	15 international person-months and 30 national person-months	\$1.00 million
	Project management training program (CQS)	8 international person-months	\$0.25 million

<sup>13</sup> Details in Climate Change Assessment (accessible from the list of linked documents in Appendix 2).

<sup>14</sup> Available at: <http://www.adb.org/documents/procurement-regulations-adb-borrowers>.

Aspects	Arrangements		
	Project management consultant	42 national person-months	\$0.12 million
	Safeguards monitoring	2 contracts (40 national person-months)	\$0.20 million
	Financial audit (LCS)	Lump-sum contract	\$0.07 million
Retroactive financing and/or advance contracting	Retroactive financing of up to 20% of the loan amount will be allowed for civil works and consulting services expenditures incurred before loan effectiveness but not earlier than 12 months before loan signing. Advance contracting will be applied for civil works and consulting services for construction supervision. Any approval of advance contracting will not constitute a commitment by ADB to finance the project.		
Disbursement	The loan proceeds will be disbursed following ADB's Loan Disbursement Handbook (2017, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.		

ADB = Asian Development Bank, CQS = consultant's qualifications selection, LCS = least-cost selection, OCB = open competitive bidding, QCBS = quality- and cost-based selection.

Source: Asian Development Bank estimates.

### III. DUE DILIGENCE

#### A. Technical

24. The project road is an access-controlled dual carriageway four-lane international road with a total width of 27.6 meters (m), including traffic lanes (four lanes of 3.75 m each), paved shoulders (8 m), median (3 m), and unpaved shoulders (1.6 m). The median width varies depending on the terrain. The design speed is 100 km per hour, with some segments reduced to 80 km per hour in mountainous sections to improve road safety. The road design was carried out in accordance with the Standard on Geometrical and Structural Requirements for the Public Motor Roads of Georgia with reference to relevant clauses of the Trans-European Motorway standards. Because of mountainous terrain and the design standard adopted, only short sections will follow the existing alignment. Frontage roads, two interchanges and access roads to these interchanges will maintain the existing local traffic along the project highway. The mountainous terrain requires construction of 35 bridges with a total length of 8.3 km and 20 tunnels with a total length of 9.4 km (for both directions cumulatively), making the project technically highly complex. Tunnels are designed in accordance with the European Parliament and Council directives.

25. The detailed design of the project, including bill of quantities (BOQ), draft bidding documents, an environmental impact assessment, and a land acquisition and resettlement plan is being carried out under ADB's ongoing Loan 2843-GEO.<sup>15</sup> The consultants recruited through ADB's TA for 9211-GEO (i) carried out an independent proof check of the detailed design to ensure quality of the major items such as tunnels, bridges, deep cuttings, climate change adaptation, and draft bidding documents; (ii) ensured the overall consistency between design drawings and the BOQ; and (iii) prepared the road safety audit of the design, sector assessment and the project's economic and financial management assessment. Based on the due diligence conducted, the detailed design is consistent with the design standards, and the BOQ is reasonably accurate, with sufficient contingencies to mitigate project risks.

#### B. Economic and Financial

26. **Economic.** The project will expand Georgia's transit capacity and provide enhanced safety features. It will reduce transport costs and provide much-needed additional capacity.

<sup>15</sup> ADB. (2009). *Report and Recommendation of the President to the Board of Directors: Proposed Multitranchise Financing Facility to Georgia for the Road Corridor Investment Program*. Manila

Georgia plans to capture transport cost savings and use them to generate wider economic benefits, for example by establishing logistics centers along the EWH. The economic evaluation of the project followed ADB's Guidelines for the Economic Analysis of Projects and made use of the Highway Development and Management Model version 4 (HDM-4).<sup>16</sup> Base year (2017) traffic was estimated at 14,462 vpd, of which 8% were truck-trailers. During 2007–2016 traffic grew at 9% per year, approximately double the growth rate of GDP over the same period. Acknowledging the various influences on traffic growth, including diversion of some passenger traffic to rail, the weighted average traffic growth rate from 2018 to 2041 was estimated at 3.9%, implying an income elasticity of 1.0 with respect to forecast GDP growth over the same period. The new port at Anaklia, currently in its first phase of development, is expected to add an additional 150 vpd in 2022. The economic costs are (i) capital, including physical contingencies but excluding taxes; and (ii) O&M. The economic benefits are (i) savings in vehicle operating costs, (ii) journey time savings, (iii) reduced vehicle emissions, and (iv) reduced crash costs. The results of the economic analysis showed that the project is just economically viable with an estimated economic internal rate of return (EIRR) of 9.2%.<sup>17</sup> Sensitivity tests confirmed that the project would remain economically viable should the envisaged project costs increase by less than 3%, or benefits be reduced to 98% or less. However, the EIRR does not capture larger regional beneficial impacts which are difficult to quantify.

27. **Financial.** The MRDI is a general government sector unit and the project is nonrevenue generating. The project road will be maintained under the government's normal routine maintenance program. The yearly allocation for rehabilitation and routine maintenance for international and secondary roads of \$5,000 per km per year will be adequate to maintain project road function without undue damage. There remains a risk that the road maintenance budget will not follow the growing needs of the maintenance because of the significant highway construction program of the government. However, the government recognizes this issue and is examining various measures to address it (e.g. through increasing funding sources and/or increasing efficiency). In addition to providing support to the Roads Department to strengthen the existing O&M system of the highways, all development partners have been committed to provide support for the government to further strengthen the existing road asset management system and to reduce the maintenance backlog.

### C. Governance

28. The procurement risk is rated medium based on a procurement risk assessment prepared in accordance with ADB's Guide on Assessing Procurement Risks and Determining Project Procurement Classification.<sup>18</sup> The Roads Department is almost fully staffed (one position remains unfilled), functional and is currently implementing projects financed by ADB, the EIB, JICA, and the World Bank. The Roads Department has a proven track record in adhering to ADB's Procurement Guidelines and bidding procedures in procurement of works contracts and ADB's Guidelines on the Use of Consultants in recruiting consulting services financed by ADB. The Roads Department has adequate capacity to ensure the successful procurement and efficient implementation of the project. The financial management assessment prepared under the ongoing TA activity concluded that the technical capacity of ETCIC meets ADB requirements for financial management, and the financial management risk is moderate. The MRDI, the Roads Department, and ETCIC have up-to-date and adequate understanding of ADB's financial management policies and implementation procedures, acquired in part through extensive ADB

<sup>16</sup> ADB. 2017. *Guidelines for the Economic Analysis of Projects*. Manila.

<sup>17</sup> The minimum required EIRR is 9% as per ADB's Guidelines for the Economic Analysis of Projects (footnote 16).

<sup>18</sup> ADB. 2015. *Guide on Assessing Procurement Risks and Determining Project Procurement Classification*. Manila.

supported operations in the country. The MRDI has sufficient capacity in financial management, within the government's budgetary procedures, for the recurrent expenditures required for maintaining and operating the project in a sustainable manner. Overall, there are only limited fiduciary risks and such risks will be mitigated by implementing capacity building support to the Roads Department.

29. Georgia's anticorruption regulatory framework is outlined in the Law of Georgia on the Conflict of Interests and Corruption in Public Service, 2009. The Investigative Division of the Prosecution Service is the key anticorruption body. The Anti-Corruption Interagency Council under the Ministry of Justice of Georgia is tasked with coordinating anticorruption efforts. Georgia adopted its inaugural National Anti-Corruption Strategy and Action Plan in 2005. Georgia is a leader in anticorruption among non-Baltic, former Soviet Union countries. While Georgia has experienced some important legal improvements to further strengthen this development during recent years, limited enforcement of anti-corruption laws and regulations hinders further progress.<sup>19</sup> ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and the MRDI. The specific policy requirements and supplementary measures are described in the PAM (footnote 10).

#### **D. Poverty, Social, and Gender**

30. There are three communities with a total of 17 villages in the project area, consisting of 1,266 households with 4,498 residents, who are mainly poor. Many of the men work in Tbilisi, usually with incomes of GEL20–GEL25 per day. Most of the women are self-employed: selling fruits, vegetables and other agriculture products, either on the side of the current roads or in the weekly market in Khashuri. Walking is the main form of transportation, and a few privately run minibuses offer alternative transportation. Many residents, including students attending schools in adjoining communities, hitch rides with private cars. The project is expected to provide benefits to surrounding communities by improving their mobility and better ensuring their access to basic educational and health services, as well as employment opportunities. Women's direct benefits from the project will derive from specific targeted actions such as: (i) providing access to livelihood opportunities, through allocation of commercial spaces for women entrepreneurs; (ii) conducting livelihood trainings for surrounding communities; (iii) ensuring women's equal and meaningful participation in all consultation meetings; (iv) improving safe accessibility of pedestrians, most of whom are women and children, with well-lit sheds, zebra crossings, and ample safety signs; (v) ensuring women's meaningful participation in road safety campaign programs; (vi) engendering of the road maintenance sustainability strategy, and the national road safety action plan, and (vii) providing technical training of women in project management, among others.

31. The gender categorization of the project is effective gender mainstreaming. The Roads Department will engage a gender specialist to ensure the quality and timely implementation of the project gender action plan.

#### **E. Safeguards**

32. In compliance with ADB's Safeguard Policy Statement (SPS) (2009), the project's safeguard categories are as follows.<sup>20</sup>

<sup>19</sup> Transparency International. 2018. Europe and Central Asia: More Civil Engagement Needed (Part II). [https://www.transparency.org/news/feature/europe\\_and\\_central\\_asia\\_more\\_civil\\_engagement\\_needed\\_part\\_II](https://www.transparency.org/news/feature/europe_and_central_asia_more_civil_engagement_needed_part_II).

<sup>20</sup> ADB. Safeguard Categories. <https://www.adb.org/site/safeguards/safeguard-categories>.



33. **Environment (category A).** The project will have significant adverse impacts that are irreversible and diverse. The alignment will be partially new and will require significant amounts of tunneling and bridge building activities. Works will require construction in the Dzirula River, resulting in the loss of natural habitat with significant community impacts from resettlement and land conversion. Tunneling will require disposal of spoil during construction in the region of 1.9 million cubic m. Impacts on noise, vibration, air quality, traffic and surface water will occur during construction. The short-term nature of impacts mean that impacts will generally not be significant if mitigation is implemented correctly. During operation, the road will improve local road safety by taking through traffic off the local roads. However, noise impacts from the new alignment will be significant, requiring targeted mitigation and potential resettlement to ensure compliance with ADB's Safeguard Policy Statement. As part of environmental impact assessment,<sup>21</sup> a detailed analysis of noise impacts has been conducted and mitigation measures in compliance with ADB's Safeguard Policy Statement have been proposed. The Roads Department has the expertise to adequately manage the contractors' environmental performance. However, given the size and scope of existing and upcoming projects, it is recommended that the Roads Department further strengthen its capacity by hiring additional specialists to provide oversight of environmental, health, and safety issues of the highway projects.

34. **Involuntary resettlement (category A).** Approximately 160 households, comprising more than 200 people will be severely affected either through physical displacement (39 households) or through the loss of 10% or more of productive assets. A resettlement plan has been disclosed on the ADB website. Some people will lose direct access to the highway after the project completion. All affected people and affected households are identified in the resettlement plan and appropriate compensation included therein. The Roads Department has experience with ADB's Safeguard Policy Statement for road projects under similar conditions and in similar terrain. The Roads Department resettlement division is well staffed and experienced in preparing and implementing resettlement plans in large and complex projects, both in rural and urban settings.

35. **Indigenous peoples (category C).** No indigenous peoples are present in the project area, as defined by the ADB's Safeguard Policy Statement.

## F. Summary of Risk Assessment and Risk Management Plan

36. Significant risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan presented in the PAM (footnote 10). The risks are assessed as manageable by adopting mitigating measures, and the integrated benefits and impacts are expected to outweigh the costs of mitigation.<sup>22</sup>

**Table 4: Summary of Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigating Measures</b>
The government lacks adequate capacity to facilitate and coordinate the interfacing of respective road design and work scheduling tasks among development partners involved in the project.	The Asian Development Bank has engaged 11 international specialists to support the design review, and procurement of the project. The project includes funding for project management and institutional support, which will be used to obtain expertise needed for project implementation.
An inadequate road maintenance budget may jeopardize the sustainability of large road network	The development partners' joint policy dialogue seeks to increase the road maintenance fiscal budget. In addition, efforts are being made to use limited maintenance resources more productively and efficiently by

<sup>21</sup> The draft environmental impact assessment was disclosed on 29 May 2018, more than 120 days prior to board consideration.

<sup>22</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

<b>Risks</b>	<b>Mitigating Measures</b>
investments, and preservation of road assets.	(i) reducing the maintenance backlog, particularly for secondary roads, (ii) developing the Roads Department's road asset management system further, and (iii) introducing performance-based maintenance contracts. The project also includes funding for developing more functional and effective road network operation and maintenance system.
A small number of affected people may decline relocation and resort to lengthy disputes outside of the grievance redress mechanism, and thereby disrupt construction works.	During project preparation, consultations were conducted with nongovernment organizations and local residents to explain the legal framework allowing involuntary land acquisition and expropriation for public purposes; this will continue during project implementation. The Roads Department will closely coordinate with law enforcement agencies to avoid indefinite grievance cases that disrupt construction works.

Source: Asian Development Bank estimates.

#### IV. ASSURANCES AND CONDITIONS

37. The government, MRDI, and the Roads Department have assured ADB that implementation of the project shall conform to all applicable ADB policies, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAM and loan documents. The government, MRDI, and the Roads Department have agreed with ADB on certain covenants for the project, which are set forth in the draft loan agreement.

#### V. RECOMMENDATION

38. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of €255,297,000 to Georgia for the East–West Highway (Khevi–Ubisa Section) Improvement Project, from ADB's ordinary capital resources, in regular terms, with interest to be determined in accordance with ADB's regular lending facility; for a term of 26 years, including a grace period of 11 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan agreement presented to the Board.

Takehiko Nakao  
President

3 September 2018

## DESIGN AND MONITORING FRAMEWORK

<b>Impact the Project is Aligned with</b> Georgia is a regional and logistics hub and more attractive for businesses (Socio-economic Development Strategy of Georgia: Georgia 2020) <sup>a</sup>			
<b>Results Chain</b>	<b>Performance Indicators with Targets and Baselines</b>	<b>Data Sources and Reporting</b>	<b>Risks</b>
<b>Outcome</b> Efficiency and safety of road transport along the EWH improved	By 2023: a. Average travel time from Chumateleti to Argveta reduced to 45 minutes (2017 baseline: 71 minutes)  b. Road crash rate per 100 million vehicle-km traveled on the EWH reduced by 30% of the existing national road crash rate (2017 baseline: 13.6)	a. Supervision consultant's annual project progress report  b. Roads Department's crash data statistics (annually)	Change in government priorities shifts resources away from road maintenance jeopardizing sustainability of road network and preservation of assets.
<b>Outputs</b> 1. 12 km section of EWH between Khevi and Ubisa constructed  2. Road safety awareness increased  3. Capacity of the Roads Department for operation and maintenance and project management improved	By 2021: 1a. 12 km of new access controlled dual carriageway or four-lane divided highway reconstructed and/or constructed to 80 km per hour design standard, partly on a new alignment, and with at least three gender-inclusive features (2017 baseline: 0 km) <sup>b</sup>  By 2022: 2a. Road safety awareness campaign messages reach at least 70% of the targeted total population, out of which at least 40% are women (2017 baseline: Not applicable)  3a. Road maintenance sustainability strategy, with gender-inclusive provisions, accepted by the Ministry of Regional Development and Infrastructure (2017 baseline: Not applicable)  3b. At least 20 Roads Department staff, including all qualifying women staff have increased knowledge and skills in procurement, project implementation, and project management (2017 baseline: Not applicable)	1a. Supervision consultant's project progress reports (annually)  2a. Road safety consultant's final report, approved by the Roads Department  3a. Strategy signed by the Ministry of Regional Development and Infrastructure  3b. Survey of training participants	Despite mitigating measures in place, a small number of affected people may still decline relocation and resort to lengthy disputes outside of the grievance redress mechanism and thereby disrupt construction works.  An increase in global commodity prices beyond projections leads to considerable increases in the cost of construction materials causing delays.

**Key Activities with Milestones****1. 12 km section of EWH between Khevi and Ubisa constructed**

- 1.1 Complete detailed engineering design by June 2018
- 1.2 Start recruitment of supervision consultant in June 2018
- 1.3 Start tendering for civil works in July 2018
- 1.4 Award civil works contract by November 2018
- 1.5 Complete 100% of payments for compensation and relocation of affected people by November 2018
- 1.6 Mobilize construction supervision consultant by Q1 2019
- 1.7 Complete civil works by December 2021

**2. Road safety awareness increased**

- 2.1 Mobilize consultant and/or nongovernment organization(s) to prepare a road safety program for highways by Q3 2019
- 2.2 Implement the road safety program until Q2 2022

**3. Capacity of the Roads Department for operation and maintenance and project management improved**

- 3.1 Mobilize consultant to prepare a road maintenance sustainability strategy by Q4 2019
- 3.2 Implement the road maintenance sustainability strategy by Q2 2022
- 3.3 Mobilize consultant to develop a project management training program by Q2 2020
- 3.4 Implement the project management training program until Q2 2022

**Inputs**

Asian Development Bank: \$300.0 million (ordinary capital resources loan)  
 Government of Georgia: \$129.5 million

**Assumptions for Partner Financing**

European Investment Bank: Subsections F1 and F3 of EWH constructed/reconstructed by 2021.  
 Japan International Cooperation Agency: Subsection F4 of EWH constructed/reconstructed by 2021.

EWH = East–West Highway, km = kilometer, Q = quarter.

<sup>a</sup> Government of Georgia. 2014. *Socio-economic Development Strategy of Georgia: Georgia 2020*. Tbilisi.

<sup>b</sup> Gender-inclusive features include a rest stop built with women-friendly facilities and commercial spaces out of which at least 50% will be reserved for women's businesses, zebra crossings and ample safety signs. These features will be constructed on frontage and access roads because of lack of space for such provisions on the project road due to mountainous terrain.

Source: Asian Development Bank.

### **LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=49257-001-3>

1. Loan Agreement
2. Sector Assessment (Summary): Transport
3. Project Administration Manual
4. Contribution to the ADB Results Framework
5. Development Coordination
6. Financial Analysis
7. Economic Analysis
8. Country Economic Indicators
9. Summary Poverty Reduction and Social Strategy
10. Risk Assessment and Risk Management Plan
11. Climate Change Assessment
12. Gender Action Plan
13. Environmental Impact Assessment
14. Resettlement Plan