

## Environmental and Social Data Sheet

### Overview

Project Name:	<b>CHUMATELETI – KHEVI SECTION OF E-60 HIGHWAY</b>
Project Number:	20170288
Country:	Georgia
Project Description:	The project consists of the upgrading of the existing E60 road between Chumateleti and Khevi to dual carriageway standard. The total length of the Left Branch of the road is approximately 11.6km long, starting just to the north-east of Tunnel #3 and ending in Khevi. The works on the Right Branch start at the north-western portal of the existing Rikoti Tunnel and run for approximately 8.6km to Khevi
EIA required:	Yes
Project included in Carbon Footprint Exercise <sup>1</sup> :	No
	It is expected that the project will increase emissions by 8% over the 25 year study period or an average increase of 2,000 tonnes of CO <sub>2</sub> per year. The expected CO <sub>2</sub> emissions are below reporting thresholds for absolute emissions and the project will therefore not be included in EIB's Carbon Footprint reporting

### Environmental and Social Assessment

#### Environmental Assessment

The project consists of the upgrading of the existing E60 road between Chumateleti and Khevi to dual carriageway. The total length of the Left Branch of the road is approximately 11.6km long, and the right branch is approximately 8.6km. The project includes two 2x1 tunnels which are approximately 0.7km and 1.7km long and one 2x2 tunnel approximately 0.4km long. The project is part of overall development of E60, Georgia East-West Highway (GEWH). Although a Strategic Environmental Assessment (SEA) has not been done, the Roads Department (RD) carried out a feasibility study financed under a World Bank project for the Zemo Osiauri to Argveta section (comprising five sections F0, F1, F2, F3 and F4) of approximately 81km in 2015. This study included most of the elements normally found in an SEA and is acceptable to the Bank.

The project will pass through Khashuri and Kharagauli Municipalities, from Chumateleti to Khevi village. The East portal of Rikoti Tunnel is located in Khashuri Municipality (Shida Kartli Region), while the West portal and the section of the highway Westwards from that portal belongs to Kharagauli Municipality (Imereti Region). If located in the EU, the Project, would fall under Annex I of the EIA Directive 2011/92/EU and therefore require a full EIA including public consultations.

In Georgia, the project falls under the Category A (EIA) procedure as stipulated by the Environmental Georgian Code under Georgian law. Georgian laws and procedures encompasses in substance the principles of the relevant EU Directives, such as the EIA Directive 2011/92/EU and SEA Directive 2003/35/EC.

<sup>1</sup> Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO<sub>2</sub>e/year absolute (gross) or 20,000 tons CO<sub>2</sub>e/year relative (net) – both increases and savings.

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An Environmental and Social Impact Assessment (ESIA) Report for this sub-project (F1) has been developed (July 2018), including public consultations and accompanying management plans of a Land Acquisition and Resettlement Action Plan (LARP), Stakeholder Engagement Plan (SEP) and an Environmental and Social Management Plan (ESMP). Approval of the EIA by the Ministry of Environment Protection and Agriculture (MoEPA) will be required before the start of works. It is envisaged that the approval from the Competent Authority will be received by mid of October 2018. However, ESIA approval including Environmental and building permits will be the subject of disbursement conditions.

### ***Environmental Legislation***

The Competent Authority MoEPA will be required to issue an environmental decision stating whether in their opinion, the project will have an impact on the protected areas. Demonstrating compliance is a condition for disbursement against the project. The Bank will be requiring that the Competent Authority provide signed declarations (Forms A/B) as a condition for disbursement against the project and is already included under the GTC Framework loan.

The Ministry of Economy and Sustainable Development (MoESD) is responsible for carrying out the review of technical documentation (including conclusion of independent experts) and issuing Permits on Construction for projects, as well as for supervision over constructing activities and for arranging Acceptance Commission after completion of construction.

The Roads Department of the Ministry of Regional Development and Infrastructure (RD) is responsible for the procurement of design and EIA studies, as well as works on construction and rehabilitation of roads and is responsible for ensuring compliance with the Georgian legislation and environmental and social requirements of the relevant donor organizations

The Ministry of Culture, Monument Protection and Sports will have responsibility on supervision of the construction activities in order to protect archaeological heritage

### ***Environmental Impact***

The project includes three sections:

Section 1: *Left Carriageway* - Construction of approximately 1.3km of 2x1 carriageway between end of Zemo Osauri to Chumeteleti project (F0) and east portal of Rikoti tunnel;

Section 2: *Left Carriageway* - Construction of approximately 1.7km of 2x1 Rikoti tunnel;

Section 3: *Left and Right carriageway* - Construction of approximately 8.6km 2x2 dual carriageway between west port of Rikoti tunnel and Khevi.

During the Project feasibility phase a number of alignments were considered and the result of the feasibility report was a draft final corridor, which the detailed design used as a basis for the final road alignment (horizontal and vertical). During the detailed design, a number of factors were taken into account to determine the final alignment; they included the consideration of potential resettlement issues and social aspects such as access and noise.

Two alternative routes were examined for section 2 - Rikoti tunnel. Alternative one is approximately 2.1km long and alternative two is approximately 1.8km long. According to ESIA, potential environmental impacts are the same for both the alternatives, but for alternative one the excess material generated would be higher than with alternative two. In addition, the longer the section of the tunnel, the more vulnerable it will be in a hydro-geological respect. With consideration of these factors, ESIA recommends alternative two.

The Promoter considered two alternative routes for section 3. Under alternative one, these new lanes would be separated from the existing ones passing on the right bank of river

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Rikotula and follow a new alignment on the left bank of the river. This would require clearing and cutting of the forested mountain slope, and building of additional bridges and overpasses. Alternative two implied widening the existing corridor on the right bank of the river Rikotula to place additional two lanes adjacent to the present ones. ESIA recommends alternative two, as mitigation of its negative impacts is technically more feasible and financially more affordable than alternative one.

### ***Bio-diversity***

Site clearance carried out for the Project will imply removal of vegetation, including cutting of trees. Removal of trees for the road construction needs are expected not to cause functional damage to the ecosystem, and is expected not to affect any critical habitats.

The risks of slope destabilization, erosion and landslides are expected to be associated with creation of the new corridor that implies clearing of vegetation, especially – removal of trees. The impact on fauna is expected to be higher for the western portal of Rikoti Tunnel to village Khevi. This 5-km-long section is covered with primary and secondary forest massifs and is expected to have an impact on the animals' reproduction ability.

The project zone passes along Rikotula River and crosses it at six places and expected to have an impact on water resources during the construction as well as operation and maintenance period.

No protected areas are expected to be impacted. According to the ESIA submitted by the Promoter, construction and operation of the EWH within Chumateleti-Khevi section will not have impact on the protected areas, as the closest national park of Borjomi-Kharagauli is approximately 6kms from the road corridor

Environmental Management Plan (EMP) includes specific mitigation plans for Biodiversity Management. Some of the mitigation measures identified in ESIA are:

- RD to conduct monitoring of noise levels and depending on the outcome, consider placement of noise barriers within the Khevi village;
- Appropriate solution to prevent erosion of embankments (cut / fill) – using reinforced precast concrete facing panels with geosynthetic strip reinforcements, gabions facing with coated steel wire double twist mesh reinforcements and reinforced earth wall;
- Drainage channels to be provided with stone filters to prevent water contamination;
- Compensatory planting to be carried out within the proposed highway corridor in agreement with the Ministry of Environment Protection and Agriculture of Georgia.

### ***Climate change***

Climate adaptation measures were examined in the ESIA and high-risk areas were identified as landslides, flooding and snow loading. Bridges, tunnels, cut sections and drainage structures were expected to be potentially at high and moderate risk from climate change. Road surface, road embankments, road base and interchanges were expected to be at "low risk from climate change".

The study corridor is located on the border of climatic districts of east-west Georgia and runs through the eastern periphery of the humid subtropical climate district of Georgia. Average annual air temperature reaches a maximum in August - +26.5 0C, while the minimum in February - 2.4 0C. The annual average rate of precipitation is 565 mm. The number of snowy days during the year is 55-60 days, the thickness of snow cover near the tunnel is frequently within the range of 0.5—0.7m.

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Average annual temperatures are expected to increase by 1.3°–1.6°C by 2050 and 3°–4°C toward 2100. The least warming is expected in the Black Sea coastal area and Kolkheti Lowland of Georgia. In the project area, by 2100, summer temperatures are expected to increase by 4.5°C. Specific climate change adaptation measures were included in the design for tunnels, bridges and drainage arrangements to cater for climate change. Costs attributed to climate adaptation were estimated at 1.6% of the overall cost.

### **Social Assessment**

The Resettlement Action Plan (RAP) submitted to the Bank has been prepared in accordance with the Policy on Involuntary Displacement of the WB. The approach adopted and the standards applied are in line with the EIB's standards for involuntary resettlement

The Project road is located on E60 between Chumeteleti and Khevi. The proposed road section is expected to affect approximately 103,431sqm of land from 115 plots.

Type of land	Number of land plots
Category 1: Agricultural	57
Category 2: Private	26
Category 3: State owned used by private users	2
Category 4: State owned	30

Most of the affected private land plots are of agricultural status plots used for fruit tree growing, crop cultivation or hay production, some of these land plots – for residential needs. 28 land plots are of non-agricultural status.

Overall, the project is expected to have direct impact over 119 Affected Households (AHs). In total the project is expected to affect 36 major structures (residential and commercial buildings), 54 auxiliary buildings (cattle-shed, warehouses, barns, outdoors toilets etc.) and 97 small structures (fences, gates etc.). The project is also expected to affect in total 15 business.

RAP implementation has not started and will be subject to the approval from the relevant ministry.

### **Gender Impacts**

The project impact extends to Affected Person's (APs) comprising 53.6% male and 46.4% females: 187 male and 162 females. Further, 5 of the 107 AHs are headed by women. The project is expected to have a positive impact on gender, and civil works contracts and include provisions to encourage employment of women during implementation. Additionally, women headed households have been considered as vulnerable and special assistance is expected to be provided in the RAP entitlements.

### **Public Consultation and Stakeholder Engagement**

This project falls under category A EIA that requires two rounds of consultations. A scoping consultation meeting was carried out in May 6, 2016 to provide an overview of the project. As part of the ESIA, consultations were held in September 2016 with the owners and employees of businesses located in the vicinity of the highway corridor, as well as with individual entrepreneurs. Information-sharing meetings were also held with the representatives of Khashuri municipality and population of Khevi village.

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The first Public Consultation Meeting on the Draft Environmental and Social Impact Assessment Report for the Modernization of Chumateleti-Khevi Section of East-West (E-60) Highway was conducted in 10th of March in 2017 in Village Vertkvichala. The second Consultation Meeting on the Draft Environmental and Social Impact Assessment Report was conducted in Khashuri Municipality and in Kharagauli Municipality buildings in January 12, 2018. The draft RAP was discussed on January 12, 2018 in village Khevi.

### **Other Environmental and Social Aspects**

An Environmental and Social Monitoring Plan (ESMP) has been included in the ESIA and submitted to the Bank. The Contractor will be required to submit the Site EMP outlining how he intends to implement the ESMP and ensure that all of the mitigation and monitoring is completed according to the implementation arrangements specified in this ESMP and the ESIA as a whole.

## **Conclusions and Recommendations**

The project is expected to have limited negative environmental impacts during construction and operation. The residual impact after compensatory and mitigating measures is expected to be limited and is adequately addressed in the project's management plans including the Environmental Impact Assessment (ESIA) and Land Acquisition and Resettlement Plan (LARP). Subject to the fulfilment of the below-mentioned conditions, the project is acceptable for EIB financing in E&S terms.

Prior to disbursement against this sub-project, the disbursement conditions and undertakings agreed under Georgia Transport Connectivity (GTC) Framework Loan will need to have been met. As anticipated under GTC Framework Loan, the following further specific conditions and undertakings shall apply for this sub-project:

Before first disbursement:

- (a) Confirmation that at least 50% of the land is available to contractor as per approved LARP

Undertakings

- Ensure that a third party evaluation of the RAP (s) implementation will be undertaken at the end of implementation;

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