

# Environmental Impact Assessment

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September 2018  
Final

## GEO: East–West Highway (Khevi–Ubisa Section) Improvement Project

### Section F2 of the Khevi–Ubisa–Shorapani–Argveta Road (E60 Highway)

#### Part 6 – Main Text

#### Sections H to J

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## H.4 EMP Costs

879. Most costs associated with the environmental recommendations of the EMP are a normal part of preparing the bid and contract documents and ensuring that proper environmental provisions are incorporated therein. The installation of septic systems at construction camps, for example, is an environmental necessity, but not generally considered an “environmental cost”. Table 101 lists the proposed mitigation measures and indicates where they would be “included in the project budget” as part of a bid document and where additional costs are a likely “environmental cost” beyond what would normally be included in a project budget.

**Table 101: EMP Costs**

Activity	Item	Number of Units / Unit cost /US\$	Cost estimate / US\$	Responsibility
<b>Pre-construction</b>				
SEMP	SEMP and associated plans	Included in Project Construction costs	-	Contractor
Approval of Camp locations	Approval	Included in Project Construction costs	-	RD / Engineer
Incorporation of Environmental Items into Bid Documents	Item in Bid Document	Included in Detailed Design Budget.	-	RD
Obtain permits	Permits	Included in Project Construction costs	-	Contractor
Spoil disposal location	Assessment	1/ 5,000	5,000	
	National EIA	1 / 20,000	20,000	Contractor
SFF	Compensation	Approx. 16,000	16,000	RD
Noise	Expropriation	Maximum 14 / Budget according to LARP	See LARP for costs	RD
<b>Total Pre-construction costs</b>				<b>\$41,000</b>
<b>Construction</b>				
Standard site management Additional environmental measures	Septic Tanks	Included in Project Construction costs	-	Contractor
	Spill Kits	20 / US\$200	4,000	Contractor
	Bunds for fuel and oil storage	Included in Project Construction costs	-	Contractor
	Waste containers	Included in Project Construction costs	-	Contractor
	Waste Storage areas	Included in Project Construction costs	-	Contractor
	Waste collection and disposal	Included in Project Construction costs	-	Contractor
	Storage areas for hazardous materials	Included in Project Construction costs	-	Contractor
	Sprinklers for rock crushing plant	Included in Project Construction costs	-	Contractor
	Drainage (including oil and grease interceptors)	Included in Project Construction costs	-	Contractor

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Activity	Item	Number of Units / Unit cost /US\$	Cost estimate / US\$	Responsibility
	Vehicle washing bay	Included in Project Construction costs	-	Contractor
	Fire safety	Included in Project Construction costs	-	Contractor
	PPE	Included in Project Construction costs	-	Contractor
	Impervious hardstanding (for maintenance yards, bitumen storage, etc)	Included in Project Construction costs	-	Contractor
	First aid facilities	Included in Project Construction costs	-	Contractor
	Animal Crossings	Included in Project Construction costs	-	Contractor
	Fencing around PCR	1 / \$1,000	\$2,000	
	Water bowsers	Included in Project Construction costs	-	Contractor
	Water sprinklers (rock crushing plant)	Included in Project Construction costs	-	Contractor
	Dust control measures (rock crushing and batching plants)	Included in Project Construction costs	-	Contractor
	Tarpaulins	Included in Project Construction costs	-	Contractor
SFF Tree Cutting and tree removal	Labour	Included in Project Construction costs	-	Contractor
Fencing around red-list species (over 8cm in diameter)	Fencing	Approximately 200 / \$50	10,000	Contractor
Habitat Restoration	Seedlings (5-6 y/o)	12,000 / \$5	60,000	Contractor
	Seedlings (2-3 y/o)	120,000 / \$1.5	180,000	Contractor
	Seedlings (GEORed-list)	200 / \$10	2,000	Contractor
Tree / Vegetation maintenance	Labour and water	Included in Project Construction costs	-	Contractor
Embankment vegetation and soil erosion measures	Vegetation, Labor and maintenance	Included in Project Budget	-	Contractor
Noise	Noise Barriers <sup>28</sup>	4,000 m / \$1,352 m	5,408,000	Contractor
	Noise Barrier foundations	1,480 m / \$200 m	296,000	Contractor
Training & Awareness Programs	Safety Training	Included in Project Budget	-	Contractor
	HIV/AIDS Training	4 / US\$1,000	4,000	Independent Contractor

<sup>28</sup> Cost estimate is provided by **Appendix H**.

Activity	Item	Number of Units / Unit cost /US\$	Cost estimate / US\$	Responsibility
	Toolbox Training	Included in Project Budget	-	Contractor
	Construction orientation meetings	Included in Project Budget	-	Contractor
	Periodic meetings with stakeholders	Included in Project Budget	-	Contractor
Clean-up of construction sites.	Labor, waste disposal	Included in Project Budget	-	Contractor
Environmental Staff	EO	36 / US\$ 2,000	72,000	Contractor
	H&S Specialist x 12 (based on 600 workers)	432 / US\$ 2,000	864,000	Contractor
	H&S Specialist	36 / US\$ 1,500	54,000	Engineer
	IES	6 / US\$ 20,000	120,000	Engineer
	NES	36 / US\$ 1,500	54,000	Engineer
	RD Environmental Officer	36 / US\$ 2,000	72,000	RD
	RD Health and Safety Officer	36 / US\$ 2,000	72,000	RD
Total Construction Costs				US\$ 7,274,000
<b>Total Cost</b>				<b>US\$ 7,315,000</b>

**Table 102: Construction Phase Instrumental Monitoring Costs**

Activity / Item	Frequency / Responsibility	Unit Cost	Cost /USD
Air Quality Monitoring	Monthly (6 locations) / Engineer to hire certified laboratory.	200 per site	43,200
Noise Monitoring	Monthly (13 sites) / Engineer to hire certified laboratory.	200 per site	93,600
Surface Water Quality Monitoring	Bi-Weekly during construction period at the bridge sites crossing rivers (12 locations) / Engineer to hire certified laboratory.*	200 per site	172,800
Groundwater levels	Weekly during construction period of each of the 11 tunnels / Engineer to hire certified laboratory.*	20 per site	7,920
Tunnel dewatering	Bi-Weekly during construction period of each of the 11 tunnels / Engineer to hire certified laboratory.	200 per site	39,600
Vibration Monitoring	Continuous during tunneling in the vicinity of tunnels where receptors have been identified. One sensor for each cluster of house within the risk zones. At least 5 sensors within 100 m and 5 beyond. 10 sensors in total / Contractor	800	8,000
<b>Total</b>			<b>365,120</b>

\*assume 9 months construction period.

## H.5 Specific EMP (SEMP)

880. The SEMP is the documents that the Contractor shall prepare outlining how he intends to implement the EMP and ensure that all of the mitigation and monitoring is completed according to the implementation arrangements specified in this EMP and the EIA as a whole.

881. The SEMP will describe the precise location of the required mitigation / monitoring, the persons responsible for the mitigation / monitoring, the schedule and reporting methodology. The SEMP will also include the following plans:

- (i) Topic Specific Plans:
  - (a) Waste Management Plan.
  - (b) Spoil Disposal Plan for Arrangement of Spoil Disposal Area.
  - (c) Re-cultivation Plan.
  - (d) Traffic Management Plan.
  - (e) Occupational Health and Safety Plan.
  - (f) Emergency Response Plan.
  - (g) Air Quality Plan.
  - (h) Spill Response Plan.
  - (i) Vibration Monitoring Plan.
  - (j) Clearance, Re-vegetation and Restoration Management Plan.
  - (k) Groundwater Management Plan.
  - (l) Tunnel Blasting Plan.
  - (m) Noise Management Plan.
  - (n) Biodiversity Action Plan.
- (ii) Site Specific Plans:
  - (a) Construction Camp Plan.
  - (b) Asphalt Plant Plan.
  - (c) Rock Crushing Plant Plan.
  - (d) Concrete Batching Plant Plan.
  - (e) Bridge Construction Plan (for each bridge construction site)

882. The SEMP will be submitted to the Engineer and RD for approval at least 10 days before taking possession of any work site. No access to the site will be allowed until the SEMP's are approved by the Engineer and RD. New topic specific or site specific EMPs may also need to be developed by the Contractor during the construction phase. These new plans will also need to be approved by the Engineer and the RD.

## **H.6 Bid Documents**

883. The Bid Documents for the potential Contractor will contain two sections relating to environmental issues, firstly a basic clause indicating that the Contractor will be responsible for following the requirements of the EMP and that he should prepare his own SEMP for the Project. Secondly, the EMP shall be repeated in its entirety as an Annex to the Bid Documents so as the bidder is aware of his environmental requirements under the Project and help him put environmental costs to his proposal.

## **H.7 Contract Documents**

884. The Contract Documents will follow a broadly similar pattern to the Bid Documents. It is not considered necessary to repeat the mitigation measures verbatim in a list of environmental contract provisions, rather the Contract will specify that the Contractor is responsible for implementation of the EMP via his SEMP. Again, the EMP will be included as an Annex to the Contract so the Contractor will be liable for any non-conformance with the EMP, and thereby this EIA.

## **H.8 Contractor Requirements**

885. As stated above, the Contractor will be responsible for the preparation of the SEMP. The SEMP will need to be fully compliant with the EMP and this EIA as a whole and will need to be prepared within 30 days of Contract award and approved 10 days prior to access to the site.

886. During construction the Contractor must retain the expertise of an Environmental Officer (EO) to implement and continually update the SEMP and to oversee and report on the operation throughout the contract period. The EO should be full-time member of staff on the Contractors roster and should be on site at least five days per week.

887. The required qualifications of the EO are as follows:

- Degree in environmental sciences and related expertise.
- Fluent in Georgian and English.
- Experience of at least one construction project of a similar size and scale.

888. The EO will be responsible for the preparation of weekly environmental checklists and an environmental section of the Contractor's monthly progress reports that shall be submitted to the Engineer for review. The Engineer shall provide a template of the checklist to the Contractor.

889. The monthly reports, which will include the weekly environmental checklists, shall contain sections relating to:

- (i) General Progress of the Project.
- (ii) Environmental Incidents; e.g. spills of liquids, accidents, etc.
- (iii) Progress of any environmental initiatives, e.g. energy savings, recycling, etc.
- (iv) Records of any environmental monitoring, both observational and instrumental.
- (v) Conclusions and Recommendations.

890. The EO shall provide daily toolbox training at the construction camp and also at construction sites. The EO shall keep a record of all monthly training and toolbox training undertaken. The Contractor shall also hire qualified Health and Safety Specialists for the Project duration. According to Georgian Law at least 1 H&S specialist is required for every 50 workers. The H&S specialists shall have at least five years on-site experience of similar sized infrastructure Projects.

## **H.9 Engineer Requirements**

891. As noted in the mitigation plans below, the Engineer is tasked with specific responsibility to review designs and ensure safeguard compliance of civil works – with particular emphasis on the monitoring of implementation of EMP through the Contractors SEMP and related aspects of the project. The Engineer will also be responsible for reviewing and approving the monthly reports prepared by the Contractor, especially the first monthly report, to ensure that it contains all of the required reporting elements, such as instrumental monitoring results. The Engineer will also be responsible for regular review and attendance of the Contractors environmental, health and safety training.

892. The Engineer is also responsible for engaging external services from a certified laboratory for instrumental monitoring of air quality, noise and water during the construction phase.

893. The Engineer should retain the use of Environmental Specialist, both national (NES) and international (IES), to ensure that the Contractor is compliant with his environmental obligations. Terms of reference for both specialists is provided below.

### **Engineers National Environmental Specialist**

894. Scope of Services: He/she will (i) review all documents and reports regarding the integration of environmental including contractor's environmental action plan, (ii) supervise the contractors' compliance to EMP, and (iii) prepare monthly compliance reports.

895. Qualification: Degree in environmental sciences or equivalent. Preferably five years' experience in conducting environmental impact assessments and implementation of environment mitigation plans and/or monitoring implementation of environmental mitigation measures during implementation of projects including highway projects funded by developing partners.

896. Time Period – The NES shall be employed permanently over the duration of the construction period.

### **Engineers International Environmental Specialist**

897. Scope of Services: The IES will prepare a detailed action plan including environmental monitoring checklists to be completed by the NES. He/she will conduct environmental training and briefings to provide environmental awareness on ADB and the government environmental safeguards policies, requirements and standard operating procedures in conformity with the government's regulations and international practice for project and RD Safeguards staff; ensure baseline monitoring and reporting of Contractor's compliance with contractual environmental mitigation measures during the construction phase.

898. Qualification: Degree or diploma in environmental sciences or equivalent. Preferably fifteen years' experience in conducting environmental impact assessments and implementation of environment mitigation plans and/or monitoring implementation of environmental mitigation measures and health and safety plans during implementation of projects including road projects funded by developing partners, including twelve years' international experience. Working knowledge of Georgia is preferred.

899. Time Period: The IES shall be engaged on a part-time basis for a period of five months spread over the duration of the construction period (two months per year). The specific on-site inputs will be determined by the Engineers Team Leader and the RD.

900. The Engineer shall also retain a national health and safety specialist for the duration of the Contract. The specialist will be responsible for the day to day monitoring of health and safety aspects of the Contractors works as well as keeping a log of safety statistics.

### **H.10 RD PIU Requirements**

901. A review of the capacity of the RD was undertake as part of this EIA. The review indicates that the existing RD has the expertise to adequately manage the Contractors environmental performance. However, given the size and scope of the Project and the combined projects of sections F1, F2, F3 and F4 it is recommended that a dedicated Environmental and Social Officer be hired to manage E-60 projects. In addition, it is recommended that a dedicated Health and Safety Officer also be hired by the RD to provide similar oversight of E-60 activities.

902. It is also recommended that the PIU coordinate with the Contractors of all lots along the E-60 through Monthly Contractors Meetings to discuss issues such as spoil disposal, access roads, shared use of resources, etc.



## H.11 EMP Implementation Summary

903. The following Table summarizes the various institutional responsibilities for the implementation of the environmental management plan at various stages of the Project Road rehabilitation.

**Table 103: EMP Implementation**

Project Stage	Responsible Institution	Responsibilities
Detailed Design	RD with the Detailed Design Consultant and EIA Team.	<ul style="list-style-type: none"> <li>Incorporate EMP mitigation measures into engineering design.</li> </ul>
	RD	<ul style="list-style-type: none"> <li>Ensure EMP is incorporated into the works Contracts.</li> </ul>
	RD	<ul style="list-style-type: none"> <li>Review Contractors proposals to ensure that they are aware of the EMP requirements and that line items for environmental management as per the EMP are included in the BOQ.</li> </ul>
Pre-construction	Contractor	<ul style="list-style-type: none"> <li>Prepare SEMP</li> </ul>
	Contractor	<ul style="list-style-type: none"> <li>Prepares EIA for spoil disposal site.</li> </ul>
	Contractor	<ul style="list-style-type: none"> <li>Identification of construction camp sites.</li> <li>Approvals / Licenses for construction camp sites.</li> </ul>
	Engineer, ADB and PMU	<ul style="list-style-type: none"> <li>Review and approve SEMP</li> </ul>
	Contractor and Engineer	<ul style="list-style-type: none"> <li>Site Induction</li> </ul>
Construction	Contractor (through its EM)	<ul style="list-style-type: none"> <li>Daily monitoring of environmental issues</li> <li>Preparation of weekly environmental checklists</li> <li>Preparation of Monthly environmental reports</li> <li>Preparing Corrective action plans</li> </ul>
	PMU	<ul style="list-style-type: none"> <li>Routine site visits to monitor Contractors performance.</li> </ul>
	Engineer	<ul style="list-style-type: none"> <li>Weekly monitoring of the Contractors compliance with EMP / SEMP by the NES.</li> <li>Issuing the Contractor with Non-compliance Notices</li> <li>Monthly reporting to RD of Contractors performance based on the review of Contractors weekly checklists and weekly site visits.</li> <li>Quarterly Environmental Reports prepared by the IES and submitted to PMU and ADB.</li> </ul>

# I. Public Consultation, Information Disclosure & Grievance Mechanism

## I.1 Public Consultations

904. According to the ADB Safeguard Policy Statement (2009):  
“The borrower/client will carry out meaningful consultation with affected people and other concerned stakeholders, including civil society, and facilitate their informed participation. Meaningful consultation is a process that:

- (i) Begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle;
- (ii) Provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people;
- (iii) Is undertaken in an atmosphere free of intimidation or coercion;
- (iv) Is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and
- (v) Enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

905. Consultation will be carried out in a manner commensurate with the impacts on affected communities. The consultation process and its results are to be documented and reflected in the environmental assessment report.”

906. ADB SPS (2009) states that “For environment category A projects, such consultations will necessarily include consultations at the early stage of EIA field work and when the draft EIA report is available during project preparation, and before project appraisal by ADB.” Accordingly two rounds of consultations were undertaken, initially at an early stage of the Project in June 2017 and on a draft EIA before project appraisal by ADB in February 2018.

907. In addition, further consultations will be undertaken as part of the LARP process.

### I.1.1 Scoping Consultations

908. Scoping consultations were held in June, 2017 in Boriti. The consultations were arranged by the RD. Information about the date, time and venue of the meeting was published in a newspaper. Communication with local municipal authorities was also undertaken to inform them of the meeting. Participants in the consultations were given an overview of the proposed project and then asked what they thought may be the significant issues that would require detailed study as part of an EIA. A copy of the presentation made can be found as **Appendix A**. The following provides an overview of the consultations (names of all attendees can be found in **Appendix B**).

**Table 104: Boriti Scoping Consultation**

<p><b>Date:</b> 7<sup>th</sup> June, 2017 <b>Location:</b> Boriti</p> <p><b>Panel Members:</b> Mr. Nick Skinner – International Environmental Specialist Mr. Giansante Bonin – Team Leader Ms. Maka Stamateli – National Environmental Specialist Ms Lika Bubashvili – Environmental Specialist, Roads Department of Georgia Mr. Gia Sopadze – Head of Environmental Division, Roads Department of Georgia</p>
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<b>List of Participants:</b> 25 Participants (see <b>Appendix B</b> for list)			
#	Question / Comment	Answer	EIA Status
1	When the works commence we will need to be informed in advance of where exactly the works will occur.	We will prepare procedures as part of the EIA to ensure that the Contractor provides adequate advance warning of construction works in specific areas.	Addressed under section <b>F.7.1 - Transportation Facilities &amp; Utilities.</b>
2	When will construction of the road start?	Within the next 12 months.	N/A
3	How will you dispose of spoil material from tunnels?	At the moment we are unsure about the exact locations for spoil disposal. However, we will ensure that all locations are approved by the relevant authorities and that no unauthorized disposal of spoil will occur.	Addressed under section <b>F.7.3 – Waste Management.</b>
4	Roadside businesses should be protected from construction impacts, e.g. dust, restricted access.	The EIA will have specific mitigation measures to ensure these types of impacts do not significantly impact upon roadside businesses.	Addressed as part of section <b>F.5.1 – Air Quality</b> and <b>F.7.1 - Transportation Facilities &amp; Utilities.</b>
5	Cattle underpasses should be considered.	This is an issue that we need to consider during the design.	No specific requirement for cattle underpasses due to the fact that the Project comprises mainly tunnels and bridges so cattle can move either beneath the bridges or over the tunnels.
6	Will all three construction lots be undertaken at the same time, or will they be phased? This could cause a lot of traffic disruption.	They will be phased, but at some point construction will be on-going in all three lots. Traffic management plans will be prepared by Contractors to limit traffic related impacts.	Addressed under section <b>F.7.1 - Transportation Facilities &amp; Utilities.</b>
7	Will access to properties be disrupted during construction?	There will be temporary impacts to access during the construction phase. The Contractors will be required to coordinate all of his activities with locals to ensure minimal disruption.	Addressed under section <b>F.7.1 - Transportation Facilities &amp; Utilities.</b>
8	There are periods of very high flow in the river, this should be carefully considered during the detailed design to ensure that flooding does not occur.	During detailed design hydrological studies will be undertaken to ensure that all bridges, culverts, etc are designed and constructed to the correct specification.	Addressed under section <b>F.5.5 – Hydrology.</b>
9	I am a bee-keeper and am concerned about the potential impacts to my business.	The road is unlikely to have significant impacts on the bee-keeping industry in the region. However, if there are specific issues during the construction phase that affect your business they can be raised through the grievance redress mechanism. In addition, routine dampening of construction routes to reduce the	Addressed under section <b>H.3 – Grievance Mechanism.</b>

		impacts of dust will be undertaken.	
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**Figure 157: Scoping Consultation in Boriti, 7<sup>th</sup> June, 2017**



### I.1.2 Public Consultations

909. A second round of consultations were held in Kharagauli in February 2018. Participants in the consultations were presented with the initial findings of the Georgian version of the EIA (see **Appendix C** for the presentation). The following provides an overview of the consultations (names of all attendees can be found in **Appendix D**).

**Table 105: Boriti Public Consultation**

<b>Date:</b> 22 <sup>nd</sup> February, 2018			
<b>Location:</b> Kharagauli Administrative Building			
<b>Chairman of the meeting:</b>	Gia Sopadze, Head of division for Resettlement and Environmental Protection, Roads Department of Georgia		
<b>Secretary of the meeting:</b>	Maia Stamateli, environmental specialist, Gamma Consulting Ltd		
<b>Attendees:</b>	Representatives of Roads Department of Georgia, representative of Kharagauli administration, local residents, Representatives of Gamma Consulting Ltd, representative of the Ministry of Environment Protection and Agriculture, representative of Georgian Greens (See <b>Appendix C</b> )		
#	Question / Comment	Answer	EIA Status
1	Population is asking for a map of alignment to know where the new road will be	Gia Sopadze promised to provide pdf version of the map to local authorities for reference.	Project map is provided as part of the EIA which will be disclosed.
2	Will project have impact on ground water	Tunneling may have impact on ground water. To avoid impact of possible water level change on water users, the monitoring of water level in the areas	Addressed as part of <b>F.7.6 – Tunnels.</b>

		where population relies of wells will be carried out.	
3	Construction of the road may block surface runoff, what measures are considered to avoid that	The road design considered surface runoff. Drainage system and culverts are designed with consideration of the relief	<b>Project Description, Section 2</b> , provides a summary of the drainage system and culverts.
4	There are cultural heritage sites in the area. Is there any risk of impact on them during construction and operation of the new road	The road bypasses cultural heritage sites. There is no risk of impact on aboveground monuments. Archaeological conclusion for submission to cultural heritage protection authorities is being prepared. The chance find procedure is available. Construction company identified through tender will be responsible to implement the mentioned procedure in case of any chance find.	Addressed under Section <b>F.8.5 – PCR</b> .
5	Since the new road will create a barrier for free movement of the residents it is vital to arrange passages to allow passing from one side of the highway to another	The project alignment includes bridges, tunnels. In Tbilisi Argveta direction 18 bridges and 9 tunnels, whereas in Argveta-Tbilisi direction 16 bridges and 11 tunnels will be built. Two interchanges are planned one - in the area of Sakasria village, at the left side of the river and another in the end of the Lot F2 in Boriti area. Existing road will remain in place.	Explained throughout the report that the new road will not present a barrier to the free movement of residents.
6	Will impact on trees be high?	Taxation will provide exact information on the type of species and number of the trees to be cut for the needs of the project. Impact on vegetation adjacent to the RoW will be mitigated by a range of measures suggested by the team. This includes: keeping to the boundaries of the worksites and RoW, fencing of the sensitive areas to avoid accidental damage during works, briefing of the staff in environmental HS measures and requirements.	Addressed under section <b>F.6.1 – Flora</b> .
7	Is there a risk that blasting works affect properties	Prior to blasting works properties located in potential impact zone will be checked. The status – recorded. Inspection will also help to determine blasting method and dosage. Type, 'size' of the charge, selection of time between detonations, design (e.g. closer hole spacing, smaller diameter holes), presplitting blasting, perimeter blasting and millisecond blasting technique can be used in sensitive locations to minimize blasting effect.	Addressed under section <b>F.8.6 – Noise and Vibration</b>
8	What will happen on case of damage of existing infrastructure by heavy machinery	Damage to existing road infrastructure will be repaired after completion of works in the area. The same approach will apply to any third party property (in case the claim is justified).	Addressed under Section <b>F.7.1 – Transportation and Utilities</b> .

9	Will other secondary roads be rehabilitated	The project does not envisage rehabilitation of secondary roads unless they are damaged because of the project activities.	N/A
10	Spoil disposal issue is crucial for the area. What will happen with material removed from the tunnels	The issue is very important. The EIA states the need for careful selection of the site for spoil disposal. Location of the site and spoil disposal will be done based on the spoil management plan. The latter will be agreed with local administration and environmental authorities.	Addressed under section <b>F.7.3 – Waste Management.</b>

## I.2 Planned Information Disclosure

910. It is anticipated that in compliance with ADB's SPS (2009) the document will be provided for disclosure on the ADB website and the RD Website (in local language).

911. The RD PMU will be responsible to notify and inform the public of construction operations prior to construction works, publish an emergency response plan disclosing his intentions to deal with accidents and emergencies, including environmental/public health emergencies associated with hazardous material spills and similar events, etc.

## I.3 Grievance Mechanism

### I.3.1 Introduction

912. Grievance redress mechanisms (GRMs) are institutions, instruments, methods, and processes by which a resolution to a grievance is sought and provided. GRM is seen by ADB as a pre-litigation mechanism for conciliation of disagreements and addressing concerns of project affected persons (PAPs) at early stages of dispute. GRM is aimed on smooth and creative resolution of disputes, minimizing time and resources waste and reputational risk to the project. The experience gained in ADB and other donor funded projects demonstrates that the efficient GRM enables to avoid time-consuming and complex legal procedures in majority cases of claims.

913. The GRM is an integral part of the ADB Accountability Mechanism (AM) that complements the problem solving (OSPF) and compliance review (CRP) functions of the ADB AM Policy 2012.

914. The GRM should be established and operated in compliance with the Georgian Regulations and ADB Policy requirements.

915. According to the ADB requirements, the GRM should be arranged to address the resettlement related issues (SPS 2009 – Safeguard Requirements 2: Involuntary Resettlement, Requirement 7. Grievance Redress Mechanism) and the environmental concerns of the affected communities and other stakeholders (SPS 2009 - Safeguard Requirements 1: Environment, Requirement 5. Grievance Redress Mechanism).

### I.3.2 Georgian Regulations

916. The Administrative Code of Georgia is the legal document defining the rules and procedures for the grievance review and resolution.

917. According to the law, the Administrative body receiving officially lodged claims is obliged to review the claims and engage the claimant in the grievance review and resolution process, and issue final decision in that regard.

918. Clause 181. defines the content and the grievance submission forms. In particular, the grievance package should include: a) Name of the administrative body to whom the complaints are addressed; b) Name, address and contact details of the claimant; c) Name of the administrative body, who's decisions or administrative acts are the subject of complain; d) Name of the administrative act or decision, which is subject of complain; e) Content of the claim; f) The context and facts, based on which the complaint is substantiated; g) list of attachments

919. Clauses 194 and 198 define the rules and procedures ensuring participation of the claimants in the grievance review process.

920. According to the clause 202, the decision issued by the Administrative Body in relation with the reviewed claim has a status of individual administrative legal act.

921. The standard period given for the issuance of the decision in relation with the grievance is 1 month.

### **I.3.3 ADB Policy (SPS, 2009) Requirements**

922. The borrower/client will establish a mechanism to receive and facilitate the resolution of affected persons' concerns and grievances about physical and economic displacement and other project impacts, paying particular attention to the impacts on vulnerable groups.

923. The grievance redress mechanism should be scaled to the risks and adverse impacts of the project.

924. It should address affected persons' concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to the affected persons at no costs and without retribution.

925. The mechanism should not impede access to the country's judicial or administrative remedies. The borrower/client will inform affected persons about the mechanism.

### **I.3.4 Grievance Redress Process**

926. At the LARP/EIA preparation stage, during the consultation meetings and negotiations the PAPs shall be fully informed of the grievance redress mechanism, its functions, procedures, contact persons and rules of making complaints.

927. Grievance resolution is viewed as a two-stage process, first involving local resources for the grievance resolution and only in case of failure engaging top management and entire capacity of the central offices of RD/PIUs.

928. Grievance redress procedures of Stage 1 represent an informal tool of dispute resolution allowing the PAPs and the project implementation team to resolve the disagreement without any formal procedures, procrastination and impediments. Such informal grievance redress mechanism helps to solve most of the complaints without formal procedures (i.e. without using the procedures specified in the Administrative Code or litigation). This mechanism enables unimpeded implementation of the Project and timely satisfaction of complaints.

929. Care will always be taken to prevent grievances rather than going through official procedures of Stage 2. The achievement of this goal can be ensured through careful planning and preparation of EIA and LARP, active participation of PAPs, effective consultations, proper communication and coordination among local communities, IAs and local authorities.

930. In case of failure of the grievance resolution attempts at the stage 1, the process of grievance review and resolution enters Stage 2. Stage 2 is a process formalized in accordance with the Administrative Code of Georgia. The claimant submits official claim in a written form to the RD and the RD as an administrative body is conducting the grievance review and response process following requirements of the law, regarding time frames, involvement of claimant, etc. The stage 2 process may require involvement of different departments and specialists of the RD, its consultants, local authorities and other stakeholders.

931. If the grievance is not resolved at the stage 2, the claimant has right and possibility to apply to court and the GRM helps the claimant to prepare application package. The claimant also has the possibility to make a complaint to the ADB directly at this stage.

### **I.3.5 Grievance Redress Mechanism**

932. The GRM consists of temporary, project-specific units established at the municipal level in project affected municipality and regular system established at the RD level:

- (i) **Grievance Redress Committee (GRCE)** established at municipal level as a project-specific instrument, which is functional only for the period of the project implementation.
- (ii) **Grievance Redress Commission (GRCN)** is formed as permanently functional informal structure within the RD to ensure grievance review, resolution and record.

### **I.3.6 Grievance Redress Commission for Stage 1**

933. A Grievance Redress Committee (GRCE) is an informal, project-specific grievance redress mechanism, established to administer the grievances at Stage 1. This informal body will be established at community level in both the affected Municipality. The representative of Zestafoni Municipality will be a Chairman of the GRCE. The RD representative(s) of Environmental and Resettlement Unit in GRCE shall coordinate the GRCE formation. The Contact Person will then be responsible for the coordination of GRC activities and organizing meetings. In addition, GRCE shall comprise representative of Shorapani (Secretary), representatives of PAPs, women PAPs (if any), and appropriate local NGOs to allow voices of the affected communities to be heard and ensure a participatory decision-making process.

934. GRCEs will be established at the community level (office of the official Representative of Zestafoni Municipality). The establishment of GRCE will be formalized by the protocol of the first meeting, as a part of binding agreement of the Government and ADB. For the GRCE following composition is proposed. There shall be at least one female member of the GRCE.

**Table 106: GRCE Composition**

1	Representative(s) of Environmental and Resettlement Safeguards Unit of RD	Member
2	Representatives of Kharagauli Municipality	Chairman
3	Representative of Boriti	Member



4	Representative of PAPs	Member
5	Representative of NGO	Member
6	Representative of Contractor	Member
7	Environmental and Resettlement Specialists of Engineer	Member

935. The representative(s) of the Environmental and Resettlement Unit of RD shall coordinate the work of the Committee and at the same time they will be the contact person for collecting the grievances and handling grievance log. The local authorities at the municipal level (Kharagauli), Contractor, Engineer, as well as PAPs (through informal meetings) will be informed about the contact person.

936. The PAPs should be informed about the available GRM. This shall be achieved through the public consultation process and routine community meetings throughout the construction phase.

### **I.3.7 Grievance Redress Commission for Stage 2**

937. Grievance Redress Commission (GRCN) is formed by the order of the Head of the RD as a permanently functional informal structure, engaging personnel of RD from all departments having regard to the environmental and LARP issues and complaint resolution. This includes top management, Environmental and Social Safeguards Units, Legal Departments, PR department and other relevant departments (depending on specific structure of the RD). The GRCN is involved at the Stage 2 of grievance resolution process. The Order shall also state that if necessary representative of local authorities, NGOs, auditors, representatives of PAPs and any other persons or entities can be engaged in a work of GRCN. For the GRCN the following composition is proposed below. There shall be at least one female member of the GRCE.

**Table 107: GRCN Composition**

1	RD Management	Member
2	Head of Environmental and Social Safeguards Unit at RD	Member
3	Legal Department of RD	Member
4	PR Department of RD	Member

### **I.3.8 Grievance Redress Procedures**

#### ***Stage 1 – informal review of the AP’s complaint (whether written or oral)***

938. **Grievance Collection and registration.** The representative(s) of the Environmental and Resettlement Unit of the RD is the person responsible for collecting the grievances received from different entry points and for recording them. Through the consultations conducted at the early stages of the project development and throughout construction, the PAPs will be informed that grievances should be addressed directly to the Contact Person. However, it is expected that some portion of grievances will be addressed to the local authorities at the Municipal level, to the Contractor and Engineer. All these stakeholders will arrange entry points and recording systems for grievances and will readdress the grievances to the Contact Person. Further, the Contact Person will register the grievances and will coordinate the grievance resolution process, engaging the required members of GRCE.

#### ***Step 1: Informal negotiations***

939. The Representative of the RD will review the grievance, and based on that will:

- (i) Define the list;
- (ii) Agree with the claimant the date and site for the informal meeting;
- (iii) Conduct meetings, site visits and negotiations with the PAP with participation of relevant members of the GRCE; and
- (iv) Will document all site-visits, meetings and discussions with the involved parties (minutes of meetings, photos, etc.)

940. 910. In case of amicable resolution of the dispute, a Protocol of Agreement (Protocol 1: Action Plan) will be prepared by the RD describing agreed actions, dates, other conditions. The protocol will be signed by the claimant and Contact Person. The Action Plan should define:

- (i) Clear timeline for each action; and
- (ii) Parties responsible for undertaking and completing each action, budget.

941. 911. After implementation of the agreed action another protocol is prepared by the RD (Protocol of Grievance Closure), which confirms the fact that the parties have finally resolved the dispute. The protocol will be signed by RD as a representative of GRCE and by the claimant.

**Step 2.: Formal Review of the Grievance by GRCE:**

942. If informal negotiations conducted as step 1 of the stage 1 process fails to resolve the issue, the official procedure of the grievance review by the GRCE is triggered.

943. The Contact Person of Environmental and Resettlement Safeguards Unit of RD assists the claimant to prepare the official written claim addressed to the GRCE and supplements this by his information notes.

944. The written claim will contain the following information:

- Name and contact details of the claimant;
- Date of submitting claim;
- The brief description of the essence of claim; and
- Documents prepared (photos, maps, other documents) confirming the information presented in a claim.

945. The RD and all members of the GRCE regarding the need of execution of the formal GRCE procedure. The RD will agree the date of formal meeting with the chairman and Secretary of the GRCE and inform the claimant and all members of the GRCE regarding the meeting site and date. The meeting should be held not later than two weeks after the notification issued by the RD. The RD will distribute the claim supplementary documents among the GRCE members.

946. The GRCE will engage all required specialists in reviewing the claim and, in case of need, will invite them on a planned meeting. During 1 week after the meeting the GRCE will issue its Conclusion and the Contact Person will inform the claimant about the decision.

947. In case of amicable resolution of the dispute, a Protocol of Agreement is prepared by the RD describing agreed actions, dates, other conditions. The protocol is signed by the claimant and Chairman of the GRCE.

948. After implementation of the agreed action the Protocol of Grievance Closure is prepared by the RD. The protocol will be signed by the Chairman of GRCE and by the claimant.

949. If informal negotiations conducted as stage 1 process fails to resolve the issue, the grievance resolution by GRCE at the local level is considered as not sufficient and the claim resolution process by GRCN at the central level is triggered.

950. The RD assists the claimant to prepare the official written claim addressed to the GRCE and supplements this by his information notes.

951. The written claim will contain following information:

- Name and contact details of the claimant;
- Date of submitting claim;
- The brief description of the essence of claim; and
- Documents prepared (photos, maps, other documents) confirming the information presented in a claim.

**Stage 2 – Official Review of the Grievances by GRCN**

952. The Stage 2 process is triggered by notice from the RD sent to the GRCN with the attached claim and the supplementary package of documents prepared with the assistance of the RD.

953. The notice sent by the RD contains brief description of the grievance review and resolution attempts made at the Stage 1, including explanation of the reasons of disagreement and attachments (minutes of meetings, protocols, photos etc.).

954. Upon receiving the grievance and supplementary documents, the secretary of the GRCN will register the claim in a grievance log and initiate the formal grievance review and resolution process in accordance with the requirements of the Administrative Code. The GRCN members will discuss the issue and engage relevant departments and specialists of the RD, in order to find solutions for the grievance resolution. In case of need the specialists from other governmental institutions or expert groups could be also engaged.

955. Not later than two weeks from receiving the claim, the GRCN will conduct a formal hearing participation of the claimant at a date fixed by the GRCN member secretary. On the date of hearing, the aggrieved PAP will appear before the GRCN at the RD office for consideration of grievance. The member secretary will note down the statements of the complainant and document all details of the claim, proposed solutions and final agreement.

956. In case of amicable resolution of the dispute, a Protocol of Agreement (protocol 1) is prepared by the Secretary of GRCN, describing agreed actions, deadlines and other conditions. The protocol is signed by the claimant and Chairman of the GRCN.

957. After implementation of the agreed action the Protocol of Grievance Closure is prepared by the Secretary of GRCN. The protocol will be signed by the Chairman of GRCE and by the claimant.

958. If the RD decision fails to satisfy the aggrieved PAPs, they can pursue further action by submitting their case to the appropriate court of law (Rayon Court). GRCN (secretary) will help the claimant to prepare the documents for submission to the Rayon (municipal) court.

959. A brief description of all stages of Grievance Resolution Process are given in the below.

**Table 108: Grievance Resolution Process**

Steps	Action Level	Process
Stage 1 (GRCE Level)	Step 1: Informal negotiations with PAPs	The complaint is informally reviewed by the GRCE Contact Person – Representative of Environmental and Resettlement Unit of RD, which takes all necessary measures to resolve the dispute amicably. At this stage, RD Contact Person engages in discussions with PAP

Steps	Action Level	Process
		<p>only those members of the GRCE, who have direct relation to the issue.</p>
	<p>Step 2: Formal negotiations with PAPs GRCE level resolution of grievance</p>	<p>If the oral grievance is not solved during the negotiations, the GRCE will assist the aggrieved PAPs to formally lodge the grievances to the GRCE.</p> <p>The aggrieved PAPs shall submit their complaints to the GRCE within 1 week after completion of the negotiations at the village level or later, as he wishes. The aggrieved PAP shall produce documents supporting his/her claim. The GRCE RD Contact Person will review the complaint and prepare a Case File for GRCE hearing and resolution. A formal hearing will be held with the GRCE at a date fixed by the GRCE RD Contact Person.</p> <p>On the date of hearing, the aggrieved PAP will appear before the GRCE at the Municipality office for consideration of grievance. The member secretary will note down the statements of the complainant and document all details of the claim.</p> <p>The decisions from majority of the members will be considered final from the GRCE at Stage 1 and will be issued by the RD Contact Person and signed by other members of the GRCE. The case record will be updated and the decision will be communicated to the complainant PAP.</p> <p>After implementation of the agreed action the Protocol of Grievance Closure is prepared by the RD Contact Person. The protocol will be signed by the Chairman of GRCE and by the claimant.</p>
<p>Stage 2</p>	<p>Step 3 Decision from central RD GRCN</p>	<p>If any aggrieved PAP is unsatisfied with the GRCE decision, the next option will be to lodge grievances to the RD at the national level. GRCE should assist the plaintiff in lodging an official complaint to GRCN (the plaintiff should be informed of his/her rights and obligations, rules and procedures of making a complaint, format of complaint, terms of complaint submission, etc.). The aggrieved PAP shall produce documents supporting his/her claim, in accordance with the legal requirements (Administrative Code of Georgia).</p> <p>The GRCN of the RD shall review the complaint in compliance with the procedures specified in the Administrative Code of Georgia.</p> <p>If needed, a formal hearing will be held with the GRCN at a date fixed by the GRCN member secretary. On the date of hearing, the aggrieved PAP will appear before the GRCN at the RD office for consideration of grievance. The Contact person will note down the statements of the complainant and document all details of the claim.</p> <p>The plaintiff shall be informed of the decision.</p>

Steps	Action Level	Process
Stage 3	Step 4 Court decision	If the RD decision fails to satisfy the aggrieved PAPs, they can pursue further action by submitting their case to the appropriate court of law (Rayon Court). The aggrieved PAP can take a legal action not only about the amount of compensation but also any other issues, e.g. occupation of their land by the contractor without their consent, damage or loss of their property, restrictions on the use of land/assets, etc.

### **I.3.9 Grievance Log**

960. The Grievance Logs will be developed at GRCE level.

#### **Grievance Log in GRCE**

961. The GRCE Grievance Logs will be developed and maintained at the Municipal level.

962. The Grievance Logs will be developed and managed by the RD representative at site. The logs will be kept on Excel files and shared copies will be available at the RD and at site in the Engineers office. The records in Grievance logs include the following information:

- Name and contact details of the claimant;
- Date of receiving claim;
- Form of claim – (oral or written);
- To whom the claim has been addressed initially (entry point);
- The brief description of the essence of claim;
- The stages, dates and participants of negotiations with the PAP with GRCE (stage 1);
- Minutes of meetings;
- Final decision of the GRCE (in case of the dispute is resolved, the decision is about closure of the issue. In case if the dispute remains unresolved, the decision is about passing to the stage 2 of the grievance redress process);
- Date of decision of GRCE; and
- Documents prepared by PAP with the help of GRCE for passing to GRCN.

963. The copies of the records/documents may be also kept in the municipal office.

### **I.3.10 Communication**

964. Prior to start of site works, the Contractor shall:

- Communicate the GRM to communities in the project impact zone.
- Set-up and publicize a 24-hour hotline for complaints.
- Ensure that names and contact numbers of representatives of GRCE and the Contractor are placed on the notice boards outside the construction site.

#### **ADB Accountability Mechanism Policy, 2012**

965. In addition to the GRM, the ADB has also developed its Accountability Mechanism (AM) Policy. The AM provides a forum where people adversely affected by ADB-assisted projects can voice and seek solutions to their problems and report alleged noncompliance with ADB's operational policies and procedures. It consists of two separate but complementary functions: problem solving function and compliance review function. The objective of the Accountability

Mechanism Policy 2012 is to be accountable to people for ADB-assisted projects as a last resort mechanism.

### **I.3.11 Disclosure of the Grievance Process**

966. The complaints resolution process was presented formally during the public consultations. The grievance redress mechanism will also be presented during routine community meetings in the Project area during the construction phase of the Project.

## J. Conclusions and Recommendations

### J.1 Conclusions

967. This EIA has established that, with the exception of the residual impacts mentioned below, there are no significant environmental issues that cannot be either totally prevented or adequately mitigated to levels acceptable to the GoG and international standards for Project activities.

968. The identified residual impacts during the Construction Phase include:

- Fauna - Site clearance will impact upon fauna in the Project corridor, including, for instance Otters. Residual impacts will be **MINOR/MEDIUM**. Further surveys of fauna prior to the start of construction to identify potentially affected species and action plans to manage these issues will help reduce the residual impacts.
- Aquatic Flora and Fauna – A number of bridge piers will be constructed within the Dzirula and Rikotula rivers. In addition, bridge abutments will also encroach into the river in some locations. Even though mitigation measures outlined above will help reduce the significance of the impact, residual impacts will be **MODERATE** as aquatic flora and fauna are disturbed by the Project works.
- Habitat - The clearing of a large portion of natural habitat will have significant impacts to biodiversity in the area. The restoration and re-planting programs should go a long way to mitigating these impacts, but in some locations, such as river banks, residual impacts will remain, and impacts will be **MODERATE TO MAJOR**. In addition, short term fragmentation of habitat maybe caused by access roads and other temporary construction facilities. In addition, the Clearance, Re-vegetation and Restoration Management Plan and its Biodiversity Action Plan will help manage potential impacts to habitat.
- Land Use - No residual impacts are anticipated if the LARP is implemented correctly. However, there will still be disruption to the local community during the LARP implementation process. A GRM has been prepared to manage complaints received during this process. Residual impacts will be **MINOR/MODERATE**.
- Waste Management - In general, if the mitigation measures suggested are implemented residual impacts will be minor. However, restoration of any spoil disposal area will take a number of years and as such the residual impacts for the spoil disposal areas are considered **MINOR/MODERATE**.
- Noise and Vibration – Despite the fact that comprehensive mitigation measures have been set to manage construction noise and vibration there may still be instances where construction works may result in unanticipated elevated levels of noise and vibration. However, these will only be temporary and localized. Good oversight from the Contractors HSE team and the Engineers environmental manager should limit the impact of these types of incidents. Residual impacts will be **MINOR**.

969. The identified residual impacts during the Operational Phase include:

- Surface Water Drainage - It is noted that the Project requires interceptor tanks for bridge run-off and this should also be considered for the road drainage network in general, if not **LOW/MEDIUM** residual impacts will occur during the operational phase as polluted road water run-off drains directly into surface water courses.

- Greenhouse Gases - Residual impacts from the generation of GHGs will remain throughout the lifecycle of the Project. This is an unavoidable consequence of the Project, but as noted in other sections of this report, the growth of the electric car market and more fuel efficient cars may, in the future lead to a decrease in the emissions generated on the Project road. Residual impacts will be **LOW/MEDIUM**.
- Employment - After the Project construction phase many local workers may be without employment. However, the Project will have provided them, in many instances, with additional skills and experience to work on similar projects in other locations. Local businesses supplying the Contractors and their staff may also see a fall in trade, this is an unavoidable consequence of the Project. Residual impacts will be **LOW/MEDIUM**.
- Habitat - In the short term the residual impacts will be **MEDIUM/HIGH** as the habitat is cleared. It will take a number of years for the habitat to be restored and for re-planted areas to develop into something similar to the habitats they are replacing. However, in the longer term, the significance of the impacts will reduce as these areas mature.
- Aquatic Flora and Fauna – The actual area in the river to be lost from bridge piers or retaining walls will be minimal compared to the wider aquatic habitat available in the Dzirula River, well below 1% of the habitat available. While habitat loss will cause local impacts to aquatic flora /fauna as rivers are dynamic systems it is expected that the river will make a full recovery following construction. Residual impacts will be **LOW/MEDIUM**.
- Visual Impacts - Cut slopes, embankments, concrete bridges and tunnels will have an impact on the landscape within the valley throughout the Project lifecycle. The mitigation measures outlined above may go some way to enhancing the aesthetic value of the Project especially as vegetation grows back around construction zones, and in all likelihood any negative opinion of the new road in terms of visual impact will decrease over time as people get used to the altered landscape. Residual impacts will be **LOW/MEDIUM**.
- Noise - Residual impacts will be negligible for all of the identified receptors if the noise barriers are constructed and the remaining 14 receptors are expropriated. However, some property owners may choose to sign the waiver agreement and remain in their homes. These properties may be subject to elevated noise levels above IFC limits in the future, and for these receptors residual impacts will remain throughout the lifecycle of the Project. However, the number of potentially affected receptors is only a small percentage of the overall population within the Project area. It should also be stated that with the exception of one receptor, all of the remaining 14 receptors are within IFC nighttime limits. Residual impacts will be **LOW/MEDIUM** for any receptors choosing the waiver option.

970. The total estimate costs of the environmental mitigation and management to be funded by ADB has been calculated at approximately US\$7,680,120, or approximately 2.5% of the total project cost of \$330m. This figure does not include costs of resettlement of people affected by noise (which will be included in the Project LARP).

## **J.2 Recommendations**

971. The EMP, its mitigation and monitoring programs, contained herewith will be included within the Bidding documents for project works for all Project components. The Bid documents state that the Contractor will be responsible for the implementation of the requirements of the EMP through his own SEMP which will adopt all of the conditions of the EMP and add site



specific elements that are not currently known, such as the Contractors camp locations. This ensures that all potential bidders are aware of the environmental requirements of the Project and its associated environmental costs.

972. The EMP and all its requirements will then be added to the Contractors Contract, thereby making implementation of the EMP a legal requirement according to the Contract. He will then prepare his SEMP which will be approved and monitored by the Engineer. Should the Engineer note any non-conformance with the SEMP (and the EMP) the Contractor can be held liable for breach of the contractual obligations of the EMP. To ensure compliance with the SEMP the Contractor should employ an Environmental Manager to monitor and report Project activities throughout the Project Construction phase.

