



## **Rehabilitation of an access road to village Mirashkhani**

**Environmental and Social Screening and Environmental Management Plan**

**WORLD BANK FINANCED  
The Third Regional Development Project**

**December 2017**

### **Sub-project Description**

Under the presented sub-project (SP), it is planned to rehabilitate access road to village Mirashkhani. The SP site is located in Aspindza municipality, approximately 253 km distance from Tbilisi and 30 km distance from Aspindza. The length of road to be rehabilitated is 3600 m and the width is 5 m. The road mostly passes through unpopulated area. There are some private land plots along to the road.

SP envisages implementation of the following works:

- Demolition of the existing damaged asphalt layer and using it for arrangement of road embankment;
- Rehabilitation of the existing gabion;
- Arrangement of the road foundation and shoulders with sand-gravel material;
- Arrangement of the road pavement with asphalt/concrete layer;
- Arrangement of junctions and driveways;
- Arrangement of concrete storm drainage system and grates along the road;
- Arrangement of the asphalt/concrete layer on the existing little bridge constructed over Mtkvari River and painting its railings.

According to the Investment Financing Agreement between Municipal Development Fund of Georgia and Self-governing Body of Aspindza Municipality, Aspindza Municipality will be responsible for maintenance of the road to be rehabilitated.

## Environmental screening

### (A) IMPACT IDENTIFICATION

<p>Does the sub-project have tangible impact on the environment?</p>	<p>The SP will have a modest negative environmental impact and it is expected to have tangible long-term positive impact by providing comfortable environment for the local population as well as the tourists.</p> <p>The main impact will be during the construction phase, which includes works for arrangement of the roadbed, pavement and ditches, movement and operation of heavy vehicles, supply of materials. The road to be rehabilitated is located within an area with strongly modified environment. Therefore, the impact is transitory and insignificant (noise, emissions, construction waste, temporary disturbance of traffic and access).</p>
<p>What are the significant beneficial and adverse environmental effects of sub-project?</p>	<p>The main impact will be during the construction phase, which includes works for rehabilitation of access road to the village. The expected negative environmental impacts are likely to be short term and typical for small to medium scale rehabilitation works in urban landscape: noise, dust, vibration, and emissions from the operation of construction machinery; generation of construction waste; disruption of traffic and pedestrian access, water pollution incidents, such as spillages of fuel, oil or construction materials, washing of vehicles or equipment , exposure of contaminated land and water.</p> <p>Contaminants may travel quickly downhill to a watercourse or water body. Once in a watercourse, it can be difficult to contain the pollution which can then impact over a wide area downstream. Therefore It is vital that prompt action is taken in the event of any potential water pollution incident.</p> <p>After implementation of the SP, expenditures for road operation and care-maintenance, emission of health-harmful exhaust and fuel consumption will be decreased.</p> <p>The nearest landfill is located at 30 km distance from the SP site, in Aspindza.</p> <p>To minimize road crossing ponding and flooding risk, works for cleaning of the existing storm water ditches along the road is planned within the SP.</p> <p>Transportation of the inert materials and generated waste will slightly increase a road congestion.</p>
<p>May the sub-project have any significant impact on the local</p>	<p>The SP will have a long-term positive social impact through improving living and transportation conditions of the locals as well as visitors. It</p>

<p>communities and other affected people?</p>	<p>will decrease existing negative impacts on community such as dust, emissions and noise. No land take and relocation are expected.</p> <p>Due to narrow road corridor (about 5 m) that lies between private properties (residential yards), arrangement of sidewalks is impossible without involuntary resettlement, which is justifiable neither from financial, nor from social standpoint. The long-term social impact will be positive, temporary jobs will be created during construction and hence, income of the local population will be increased.</p> <p>As the road connects village Mirashkhani and Vardzia caves to each other, implementation of the presented SP will improve attraction of private sector investment in tourism infrastructure (hotels, restaurants, shopping, entertainment, private business).</p>
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(B) MITIGATION MEASURES

<p>Were there any alternatives to the sub-project design considered?</p>	<p>As the SP envisages rehabilitation of the existing road, alternatives regarding to the SP design were not considered.</p>
<p>What types of mitigation measures are proposed?</p>	<p>The expected negative impacts of the construction phase can be easily mitigated. The contractor will be responsible for the waste disposal at the permitted location, use the quarry materials from the licensed quarries only, prevent water and soil from pollution (fuel spills due to equipment failure, raw asphalt/concrete spills), avoid disturbance of population (noise, dust, emissions) through proper work/supplies scheduling, traffic management, good maintenance of the construction machinery, works should not be executed during rainy weather, construction materials will not be allowed to enter any watercourse, revision of vehicles will be required to ensure that there is no leakage of fuel and lubricating materials, all machinery will be maintained and operated such that all leaks and spills of materials will be minimized, contractor will be required to organize and cover material storage areas. The material storage sites should be protected from washing out during heavy rainfalls and flooding through covering by impermeable materials, car maintenance points will not be located within 50m of any watercourse.</p> <p>In the process of the implementation period of rehabilitation works, it is necessary to manage traffic movement.</p>

<p>What lessons from the previous similar projects have been incorporated into the sub-project design?</p>	<p>MDF have wide experience of implementation of medium and large scale road and streets rehabilitation sub-projects financed by various donor organizations. Based on lessons learned from previous similar projects, design envisages not only rehabilitation of road pavement but also rehabilitation of storm water ditches which will backing further maintenance of the road cover.</p>
<p>Have concerned communities been involved and have their interests and knowledge been adequately taken into consideration in sub-project preparation?</p>	<p>MDF and local municipality will organize consultation meeting to discuss about draft EMP with local population prior tendering of the construction works.</p>

(C) CATEGORIZATION AND CONCLUSION

Conclusion of the environmental screening:

1. Subproject is declined
2. Subproject is accepted

Subproject preparation requires:

1. Completion of the Environmental Management Checklist For Small Construction and Rehabilitation Activities
2. Environmental Review, including development of Environmental Management Plan

### Social Screening and Cultural Resource Screening of SP

Social safeguards screening information		Yes	No
1	Is the information related to the affiliation, ownership and land use status of the sub-project site available and verifiable? (The screening cannot be completed until this is available)	X <sup>1</sup>	
2	Will the sub-project reduce people's access to their economic resources, such as land, pasture, water, public services, sites of common public use or other resources that they depend on?		X
3	Will the sub-project result in resettlement of individuals or families or require the acquisition of land (public or private, temporarily or permanently) for its development?		X
4	Will the project result in the temporary or permanent loss of crops, fruit trees and household infra-structure (such as ancillary facilities, fence, canal, granaries, outside toilets and kitchens, etc.)?		X
If answer to any above question (except question 1) is "Yes", then <b>OP/BP 4.12 Involuntary Resettlement</b> is applicable and mitigation measures should follow this OP/BP 4.12 and the resettlement Policy Framework			
Cultural resources safeguard screening information		Yes	No
5	Will the project require excavation near any historical, archaeological or cultural heritage site?		X
If answer to question 5 is "Yes", then <b>OP/BP 4.11 Physical Cultural Resources</b> is applicable and possible chance finds must be handled in accordance with OP/BP and relevant procedures provided in the Environmental and Social Management Framework.			

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<sup>1</sup> According to the cadastral information, the section of the road to be rehabilitated is registered as a property of Aspindza Municipality

Environmental Management Plan

PART A: GENERAL PROJECT AND SITE INFORMATION

INSTITUTIONAL & ADMINISTRATIVE		
Country	Georgia	
Project title	Regional Development Project 3	
Sub-Project title	Rehabilitation of Access road to village Mirashkhani	
Scope of site-specific activity	<p>Under the presented sub-project (SP), it is planned to rehabilitate access road Mirashkhani. The SP site is located in Aspindza municipality, approximately 253 km from Tbilisi and 30 km distance from Aspindza. The length of road to be rehabilitated is 3600 m and the width is 5 m. The road mostly passes through unpopulated area and along the road there are only private land plots.</p> <p>SP envisages implementation of the following works:</p> <ul style="list-style-type: none"> <li>- Demolition of the existing damaged asphalt layer and using it for arrangement of drainage pipes foundation and road embankment;</li> <li>- Rehabilitation of the existing gabion;</li> <li>- Arrangement of the road foundation and shoulders with sand-gravel material;</li> <li>- Arrangement of the road pavement with asphalt/concrete layer;</li> <li>- Arrangement of junctions and driveways;</li> <li>- Arrangement of concrete storm drainage system and grates along the road;</li> <li>- Arrangement of the asphalt/concrete layer on the existing little bridges constructed over Mtkvari River and painting its railings.</li> </ul> <p>According to the “Investment Financing Agreement between Municipal Development Fund of Georgia and Self-governing Body of Aspindza Municipality”, Aspindza Municipality will be responsible for maintenance of the road to be rehabilitated</p>	
Institutional arrangements (WB)	<p>Task Team Leader:</p> <p>Rosanna Nitti</p>	<p>Safeguards Specialists:</p> <p>Darejan Kapanadze - Environment</p> <p>Davit Jijelava - Social</p>

Implementation arrangements (Borrower)	Implementing entity: Municipal Development Fund of Georgia	Works supervisor: JV of "Soosung Engineering Co.Ltd." (Korea), "Voyants Solutions Pvt. Ltd." (India) SAMAN Corporation" (Korea) and "GZAMSHENPROJECT LTD" (Georgia)	Works contractor: (to be selected)
SITE DESCRIPTION			
Name of institution whose premises are to be rehabilitated	Aspindza Municipality		
Address and site location of institution whose premises are to be rehabilitated	Tamar Mepe str # 3, Aspindza		
Who owns the land? Who uses the land (formal/informal)?	Aspindza Municipality		
Description of physical and natural environment around the site	<p>The road (total length-3600 m, width -5 m) to be rehabilitated under the SP connects village Mirashkhani and Vardzia caves to each other. The road is conventionally divided into two sections. The first section (length- 3km) starts from the bridge over the Mtkvari River directed to village Mirashkhani and follows the Mtkvari River. It will be rehabilitated within the SP for the arrangement tourist infrastructure at Vardzia Caves. The second section (length -3600) will be rehabilitated within the present SP for rehabilitation of access road to village Mirashkhani" (see attachment 1).</p> <p>Currently, the road is in a poor condition: damaged, unsafe and uncomfortable for both traffic and pedestrians. The road passes mostly through unpopulated area, but there are some private land plots along it.</p> <p>The geological-engineering study of the area showed that on SP site and territories in adjacent area to them are stable and are in satisfying geological engineering condition. Landscape is modified because of the anthropogenic influence.</p> <p>According to the cadastral information, the section of the road to be rehabilitated is registered as a property of Aspindza Municipality.</p>		
Locations and distance for material sourcing, especially aggregates, water, stones?	The nearest landfill is located at 30 km distance from the SP site, in Aspindza		
LEGISLATION			



<p>National &amp; local legislation &amp; permits that apply to project activity</p>	<p>The SP has been classified as low risk Category B according to the World Bank policies and the ESMF.</p> <p>Georgian legislation does not require any type of environmental review, approval, or permitting for the SP. Though according to the national regulatory system:</p> <ul style="list-style-type: none"> <li>i. construction materials must be obtained from licensed providers,</li> <li>ii. if contractor wishes to open quarries or extract material from river bed (rather than purchasing these materials from other providers), then the contractor must obtain licenses for extraction,</li> <li>iii. if contractor wishes to operate own asphalt or Cement-concrete mixing plant (rather than purchasing these materials from other providers), then the contractor must obtain an environmental permit with an established ceiling of pollutant concentrations in emissions and technical report on inventory of atmospheric air pollution stationary source agreed with Ministry of Environment and Natural Resources Protection.</li> <li>iv. Permanent placement of the inert material (cut ground and sedimentary soil) generated in the course of earth works in a selected location must be approved by local (municipal) governing bodies in written;</li> <li>v. If over 200 tons of non-hazardous waste or over 1000 tons of inert materials or more than 120 kg of hazardous waste is generated annually (calculation apply to a calendar year) as a result of contractor's general activities, they shall prepare and cause the Ministry of Environment and Natural Resources of Georgia to approve the inventory of Waste and Waste Management Plan for the Company, appoint an environmental manager, and submit an information on his/her identity to the Ministry of Environment and Natural Resources Protection of Georgia in accordance with requirements of the Waste Code of Georgia.</li> </ul> <p>GOST and SNIP norms must be adhered.</p>
<p><b>PUBLIC CONSULTATION</b></p>	
<p>When / where the public consultation process will take /took place</p>	<p>MDF and local municipality will organize consultation meeting to discuss about draft ER with local population prior tendering of the construction works.</p>
<p><b>ATTACHMENTS</b></p>	
<p>Attachment 1: Site maps of the SP implementation places, orthophoto and pictures;  Attachment 2. Agreement on waste disposal (to be provided),  Copies of extraction licenses (if applicable),  permits for operating asphalt/concrete plants (if applicable)</p>	

PART B: SAFEGUARDS INFORMATION

ENVIRONMENTAL /SOCIAL SCREENING			
	Activity/Issue	Activity/Issue	Activity/Issue
Will the site activity include/involve any of the following?	A. road rehabilitation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	B. New construction	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	C. Individual wastewater treatment system	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section B below
	D. Historic building(s) and districts	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section C below
	E. Acquisition of land	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section D below
	F. Hazardous or toxic materials	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section E below
	G. Impacts on forests and/or protected areas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section F below
	H. Handling / management of medical waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section G below
	I. Traffic and Pedestrian Safety	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Section H below

PART C: MITIGATION MEASURES

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
0. General Conditions	Notification and Worker Safety	<p>(a) The local construction and environment inspectorates and communities have been notified of upcoming activities</p> <p>(b) The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works)</p> <p>(c) All legally required permits have been acquired for construction and/or rehabilitation</p> <p>(d) The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment.</p> <p>(e) Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots)</p> <p>(f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow.</p>
A. General Rehabilitation and /or Construction Activities	Air Quality	<p>(a) The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust</p> <p>(b) There will be no open burning of construction / waste material at the site</p> <p>(c) There will be no excessive idling of construction vehicles at sites</p> <p>(d) Truck loads should be confinement and protected with lining.</p>
	Noise	<p>(a) Construction noise will be limited to restricted times agreed to in the permit</p> <p>(b) During operations, the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible</p> <p>(c) The machinery should move only along the preliminarily agreed route;</p> <p>(d) The maximum allowed speed should be restricted;</p> <p>(e) Proper technical control and maintenance practices of the machinery should be applied;</p> <p>(f) No-load operations of the vehicles and heavy machinery are not allowed. Proper mufflers will be used on machinery.</p>
	Water Quality	<p>(a) Contractor will be required to organize and cover material storage areas. The material storage sites should be protected from washing out during heavy rain falls and flooding through covering by impermeable materials. Appropriate erosion and sediment control measures will be established such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers;</p> <p>(b) Contractor will plan all excavations, topsoil and subsoil storage so as to reduce to a minimum any runoff;</p> <p>(c) Revision of vehicles will be required to ensure that there is no leakage of fuel and lubricating materials. All machinery will be maintained and operated such that all leaks and spills of materials will be minimized. Daily plant checks (Vehicle Maintenance Procedure) will be undertaken to ensure no leaks or other problems are apparent.</p>

		<p>Vehicle maintenance, cleaning, degreasing etc. will be undertaken in designated areas, of hard-standing, not over made ground. Maintenance points will not be located within 50m of any watercourse;</p> <p>(d) Lubricants, fuel and solvents should be stored and used for servicing machinery exclusively in the designated sites, with adequate lining of the ground and confinement of possible operation and emergency spills. Spill containment materials (sorbents, sand, sawing, chips etc.) should be available on construction site;</p> <p>(e) Wet cement and/or concrete will not be allowed to enter any watercourse, pond or ditch.</p> <p>(f) Works on the bridges: ensure proper handling of paints materials, oil and lubricants to avoid any spillage of them into the water. It is not advised to paint the metal railings with the sprayer. Storage of potentially polluting materials within 50 m of watercourses is prohibited. Dumping of waste in the rivers/watercourses is prohibited.</p>
	Waste management	<p>(a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities.</p> <p>(b) Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.</p> <p>(c) The records of waste disposal will be maintained as proof for proper management as designed.</p> <p>(d) Whenever feasible the contractor will reuse and recycle appropriate and viable materials.</p>
	Material supply	<p>a) Use existing plants, quarries or borrow pits that have appropriate official approval or valid operating license.</p> <p>b) Obtain licenses for any new quarries and/or borrowing areas if their operation is required;</p> <p>c) Reinstate used sections of quarries and/or borrowing areas as extraction proceeds on or properly close quarries if extraction completed and license expired;</p> <p>d) Haul materials in off peak traffic hours;</p> <p>e) Place speed regulating, diverting, and warning signs for traffic as appropriate.</p>
H Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	<p>In compliance with national regulations the contractor will insure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to:</p> <ul style="list-style-type: none"> <li>- Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards</li> <li>- Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes.</li> <li>- Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement</li> <li>- Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public.</li> <li>- Arranging speed bumps to reduce vehicle speed and appropriate signs (road narrows/mind pedestrians) in agreement with local traffic police.</li> </ul>

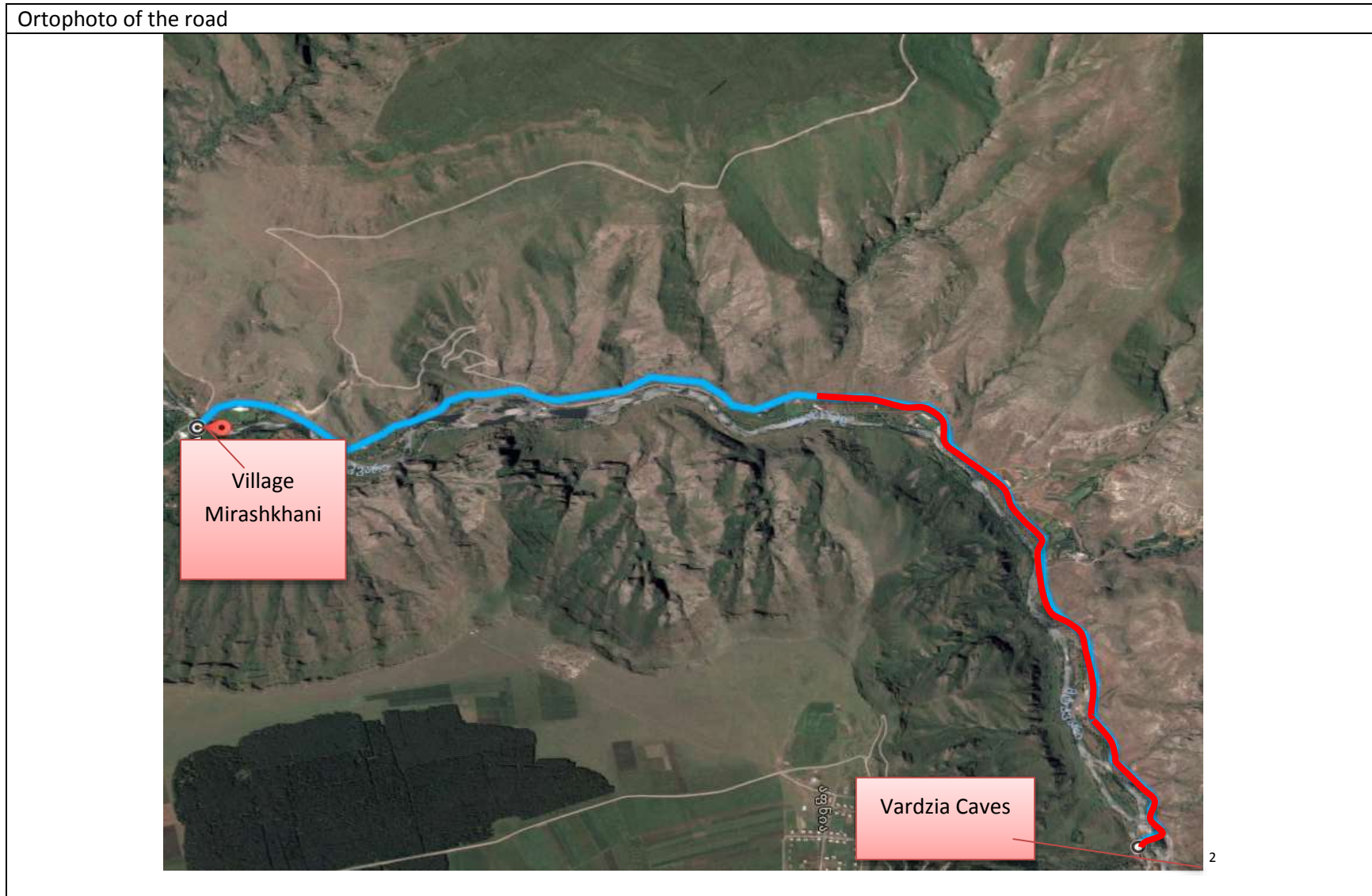
PART D: MONITORING PLAN

Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
CONSTRUCTION PHASE						
Supply with construction materials	Purchase of construction materials from the officially registered suppliers	In the supplier's office or warehouse	Verification of documents	During conclusion of the supply contracts	To ensure technical reliability and safety of infrastructure	MDF, Construction supervisor
Transportation of construction materials and waste Movement of construction machinery	Vehicles and machinery are kept in standard technical condition;  Truck loads are confined and protected with lining;  Established hours and routes of transportation are respected	Construction site	Inspection	Unannounced inspections during work hours and beyond	Limit pollution of soil and air from emissions; Limit nuisance to local communities from noise and vibration; Minimize traffic disruption.	MDF, Construction supervisor, Traffic Police
Sourcing of inert material	Purchase of material from the existing suppliers if feasible;  Obtaining of extraction license by the works contract and strict compliance with the license conditions;	Borrowing areas	Inspection of documents Inspection of works	In the course of material extraction	Limiting erosion of slopes and degradation of ecosystems and landscapes; Limiting erosion of river banks, water pollution with suspended particles and	MDF, Construction supervisor

	<p>Terracing of the borrow area, backfilling to the exploited areas of the borrow site, and landscape harmonization;</p> <p>Excavation of river gravel and sand from outside of the water stream, arrangement of protective barriers of gravel between excavation area and the water stream, and no entry of machinery into the water stream.</p>				disruption of aquatic life.	
Generation of construction waste	<p>Temporary storage of construction waste in especially allocated areas;</p> <p>Timely disposal of waste to the formally designated locations</p>	<p>Construction site;</p> <p>Waste disposal site</p>	Inspection	Periodically during construction and upon complaints	Prevent pollution of the construction site and nearby area with solid waste	<p>MDF,</p> <p>Construction supervisor</p>
Works in the waterway						

Traffic disruption and limitation of pedestrian access	<p>Installation of traffic limitation/diversion signage;</p> <p>Storage of construction materials and temporary placement of construction waste in a way preventing congestion of access roads</p>	At and around the construction site	Inspection	In the course of construction works	Prevent traffic accidents; Limit nuisance to local residents	MDF, Construction supervisor
Workers' health and safety	<p>Provision of uniforms and safety gear to workers;</p> <p>Informing of workers and personnel on the personal safety rules and instructions for operating machinery/equipment, and strict compliance with these rules/instructions</p>	Construction site	Inspection	Unannounced inspections in the course of work	Limit occurrence of on-the-job accidents and emergencies	MDF, Construction supervisor
OPERATION PHASE						
Maintenance of rehabilitated road	<p>Maintenance of relevant road signage for traffic safety;</p> <p>Demarcation of the sections of road under repair;</p> <p>Disposal of asphalt and or other waste from the repair works to the designated landfill.</p>	Rehabilitated sections of roads	Inspection	During maintenance works	Prevent road accidents and disruption of traffic	Aspindza municipality

Appendix I. Site maps of sub-project implementation places, pictures



<sup>2</sup>The red line indicates the section of the road being the rehabilitated within the SP Arrangement of tourist infrastructure at Vardzia caves. The blue line indicates the section of the road to be rehabilitated under the SP.



Photo materials



The Gabion to be rehabilitated within the SP