Municipal Development Fund of Georgia

Arrangement of Tourism Infrastructure and Safety Measures at Vani Kvabebi (Caves) Complex, Aspindza Municipality

Sub-project Environmental and Social Screening and Environmental Review

WORLD BANK FINANCED
THIRD REGIONAL DEVELOPMENT PROJECT

July, 2017
**Sub-project Description**

The Sub-Project (SP) on *Arrangement of Tourism Infrastructure and Safety Measures at Vani Kvabebi (Caves)* Complex envisages:

- Arrangement of visitor center and public toilet;
- Arrangement of parking area;
- Aplying of safety measures at the monument;
- Arrangement of recreational area;
- Arrangement of water supply, power supply and wastewater systems for tourist infrastructure, installation of biological treatment unit, and arrangement of a parking lot.

The SP site is located in Aspindze Municipality, Southern Georgia, at 253 km distance from Tbilisi and 30 km distance from Aspindza. Vani Kvabebi is a cave monastery site, excavated from the slopes of mountain on the right bank of the Mtkvari River. As the caves represents cultural heritage monument, the SP design has been already agreed with the National Agency for Cultural Heritage Preservation of Georgia.

The SP envisages implementation of the following works:

**Arrangement of parking area:** the SP envisages arrangement of parking areas at three places on the right and left sides of the road to Vani Kvabebi (Caves), started from the central motor road. The bus parking (352.8 m²), intended for two buses, will be located on the left side, at the beginning of the road. The territory will be fenced with natural stone (62 m) from three sides.

The parking area intended for the cars will be arranged adjacent to the visitor center and on the right side of the road, 400 meter far from the bus parking area. To provide guidance and information to drivers while parking, line marking for the parking area pavement is also envisaged under the SP. The mentioned territories are permissible for transports stopping and maneuvering. The land allocated for the parking will be paved with decorative concrete tiles. Within the SP, outdoor lighting will be arranged and litterbins (8 piecies) will be placed. The total parking areas will be fenced with natural stone (thickness – 30 cm). Adjacent to the parking area, mechanical metal tollbar will be arranged to prevent cars inside the territory of Vani Kvabebi (Caves).

The lands allocated for the bus parking is registered as Aspindza municipal property.

**Arrangement of visitor center and public toilet:** visitor center (57.6 m²) and public toilet (62.5 m²) will be arranged on the left side of the road. The SP envisages construction of one-story visitor center, where shop counter will be placed for soft drinks. Lining of the building façade with natural stone is planned. Metallic tiles will be used as roofing material.
Adjacent to the center, a public-toilet (including for persons with disabilities) will be constructed. The wastewater system of the building will be connected to the wastewater treatment unit (volume 8 m³/day), which will be located on the backside of the building. Treated water from the treatment facility will be discharged into the adjacent ravine. Treated water will not have any negative impact on the local environment. The Technical characteristics of treating facility and treatment data do not exceed the norms established by the environmental technical regulation approved by Resolution No. 17, January 3, 2014 of Georgian Government.

For the water supply system, borehole will be arranged in the vicinity of the public-toilet and will be fenced with metal net. The sanitary zone is of a triangular shape. It includes two level protection. The immediate section is 3 by 3 meters and extended sanitation zone is about 100 sq. meters. Water reservoir (3 ton) will be placed slightly away from the public-toilet (see attachment 1). Ultraviolet radiation will be used to treat water instead of chlorination. The ultraviolet irradiation device will be installed in the reservoir chamber.

According to the SP design, the buildings will be equipped with electric heating systems.

The lands allocated for the arrangement of the visitor center, the public toilet, car parking, the reservoir, the borehole and waste water treatment unit, are registered as Aspindza municipal property.

The surrounding area of the buildings will be paved with decorative concrete tiles, outdoor lighting will be arranged and litterbins will be placed.

**Arrangement of recreational area** - At the end of the road, the recreational area (49.5 m²) will be arranged. The SP envisages installation of benches (6 pieces) and litterbins. The area will be fenced with metal railings from three sides. Sunken basalt kerb will be arranged along the platform perimeter, while the surface will be paved with natural stone. The land intended for the recreational platform is registered as Aspindza municipal property.

**Taking of safety measures** - within the SP, safety measures will be taken at the CH monument. Tourist route schemes were studied and the necessity of safety measure taken on specific places was revealed. At the end of the concrete road to Vani Kvabebi (Caves), there is a staircase, which has quite high footsteps and no handrails. At the end of the staircase the path is divided into 2 parts, the right one requires taking of safety measures. Within the SP, arrangement of handrails (119m) along the right path and at the both side of the staircase is planned.

According to the “Investment Financing Agreement between Municipal Development Fund of Georgia and Self-governing Body of Aspindza Municipality”, Apindza Municipality will be responsible for maintenance of the visitor center, public-toilet, recreational platform and parking area. National
Agency for Cultural Heritage Preservation of Georgia will be responsible for maintenance of vertical handrails based on the “Investment Financing Agreement between Municipal Development Fund of Georgia and National Agency for Cultural Heritage Preservation of Georgia”.
# Environmental Screening and Classification

## (A) IMPACT IDENTIFICATION

<table>
<thead>
<tr>
<th>Does the subproject have a tangible impact on the environment?</th>
<th>The SP will have a modest short-term negative environmental impact and it is expected to have tangible long-term positive impact on the natural and social environment.</th>
</tr>
</thead>
</table>
| What are the significant beneficial and adverse environmental effects of the subproject? | The SP is expected to have positive long-term social impact through provision of the tourist infrastructure at Vani Caves.  
Arrangement of the light touristic infrastructure will improve touristic attraction. The increased tourist flows will have positive social impact through improvement of employment opportunities and supporting the development of tourism-based economy and cultural heritage circuits in the Samtskhe-Javakheti region.  
The SP implementation will create opportunity for new jobs for local population and increase their incomes.  
As the SP is to be implemented on a CH site, there is higher than average likelihood of encountering chance-finds during excavation works.  
In case of chance findings during the earthworks, the contractor should immediately stop any kind of physical work at the area and should inform MDF. MDF will in turn inform the Ministry of Culture and Monument Protection of Georgia that takes the responsibility for future actions. Work resuming may be provided only based on the written permission from the Ministry.  
The expected negative environmental and social impacts are likely to be short term and typical to medium scale rehabilitation works in modified landscape: noise, dust, vibration, and emissions from the operation of construction machinery; generation of construction waste.  
In operation phase proper management of generated solid waste and waste water should be ensured to reduce impact on the environment. The SP envisages arrangement of wastewater treatment units for the public toilet.  
Increased tourist flows may have indirect negative environmental impacts, such as waste generation, vandalism, etc. |
May the subproject have any significant impact on the local communities and other affected people?

SP does not require any land acquisition and does not entail any other type of resettlement.

Negative impacts are short term and limited to the construction site. They are related to the possible disturbance described above. Any other negative impacts on local population and economic livelihoods of local people are not expected to occur. Around the SP territory there is no local population. There is only a monastery complex. Noise, dust, vibration, and emissions from the operation of construction machinery and generation of construction waste may have minimal negative impact on monastic life.

The long-term social impact will be positive, after construction and rehabilitation of the public facilities number of employees will be increased. Moreover, temporary jobs will be created during construction and hence, income of the part of local population will be increased. This will contribute the development of the private sector and will lead to the growth of tourism-related production. Better transport conditions will be created which in turn will contribute development of tourism.

After the construction works of visitor center, parking area and public toilet will be increased for maintenance/repairs of the restored infrastructure and income of local population will be increased proportionally as well. It will increase presence of private sector, and result in growing number of tourism related enterprises (hotels, bars, restaurants, shopping, entertainment, etc.).

(B) MITIGATION MEASURES

<table>
<thead>
<tr>
<th>Were there any alternatives to the sub-project design considered?</th>
<th>Providing of the conveyance opportunities for disabled was added to the initial design of tourist infrastructure. Discussions were carried out regarding to the location of parking area. According to the taken decision, the selected territories are permissible for transports stopping and maneuvering.</th>
</tr>
</thead>
<tbody>
<tr>
<td>What types of mitigation measures are proposed?</td>
<td>The expected negative impacts of the construction phase can be mitigated by demarcation of the construction site, traffic management, good maintenance of the construction machinery, observance of the established working hours, and well organized disposal of waste to the formally agreed sites.</td>
</tr>
</tbody>
</table>
Instead of transporting excess inert material through several settlements to the landfill, it may be disposed in an alternative location approved by local (municipal) governing bodies in written.

In case of chance finds, works will be taken on hold and notification be sent to the Ministry of Culture and Monument Protection of Georgia. Works will resume only upon written consent of the Ministry.

The public-toilet will be connected to the biological wastewater treatment unit to avoid water pollution by newly arranged sewage system.

| What lessons from the previous similar subprojects have been incorporated into the project design? | Based on the lessons learned from previous similar projects, design envisages not only construction of the new building but also arrangement of resting areas for visitors, landscaping of the SP area and connecting of the public-toilet to the existing individual waste water treatment unit. Details securing the rights of using the building (visitor center, public toilet) and parking by disabled people is envisaged by the SP design. |
| Have concerned communities been involved and have their interests and knowledge been adequately taken into consideration in subproject preparation? | MDF and local municipality organized consultation meeting to discuss draft about ER with concerned communities before tendering of the construction works on July 7, 2017, in Aspindza Municipality. |

**D) CATEGORIZATION AND CONCLUSION**

Based on the screening outcomes,
Subproject is classified as environmental Category

| A | ☐ |
| B | ☒ |
| C | ☐ |

Conclusion of the environmental screening:
1. Subproject is declined  ☐
2. Subproject is accepted ☒

If accepted, and based on risk assessment, 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

<table>
<thead>
<tr>
<th>Social safeguards screening information</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>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)</td>
<td>✓</td>
<td>1</td>
</tr>
<tr>
<td>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?</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>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?</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>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.)?</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

If answer to any above question (except question 1) is “Yes”, then OP/BP 4.12 Involuntary Resettlement is applicable and mitigation measures should follow this OP/BP 4.12 and the Resettlement Policy Framework.

<table>
<thead>
<tr>
<th>Cultural resources safeguard screening information</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Will the project require excavation near any historical, archaeological or cultural heritage site?</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

If answer to question 5 is “Yes”, then **OP/BP 4.11 Physical Cultural Resources** is applicable and possible chance finds must be handled in accordance with OP/BP and relevant procedures provided in the Environmental Management Framework.

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1 The lands allocated for the arrangement of the visitor center, the recreational platform, the public toilet, the reservoir, the borehole, parking areas and the waste water treatment unit are registered as the Aspindza municipal property.
Environmental Review and Environmental Management Plan

Introduction

1.1. Background Information

The Government of Georgia has requested the financing of $60 million from the World Bank for implementation of the Third Regional Development Project (RDP 3). The total project cost is $75 million and includes $15 million funding from the Government of Georgia. The proposed project will be implemented by the Municipal Development Fund of Georgia (MDF).

The proposed development objective of RDP 3 is to improve infrastructure services and institutional capacity to support the development of a tourism-based economy of the Samtskhe-Javakheti and Mtskheta-Mtianeti regions. The envisaged activities are expected to bring direct benefits to the residents of these regions as well as to the tourists visiting them. More specifically, implementation of the project is expected to improve access, quality and reliability of public infrastructure; increase the volume of private sector investment in the region; and increase points of sales (tourism-related enterprises) in renovated culture heritage sites and cities. The Government will benefit from improved institutional capacity of selected agencies and local-self-governments. Overall, the population is expected to see higher incomes and better quality of life.

The SP for the Arrangement of Tourism Infrastructure at the Vani Caves complex is a part of the RDP 3 and shall be prepared, reviewed, approved, and implemented in agreement with the requirements of the Georgian legislation and the World Bank policies applicable to the RDP 3.

1.2. Institutional Framework

The Municipal Development Fund of Georgia (hereinafter: the MDF) is a legal entity of public law, the objective of which is to support strengthening institutional and financial capacity of local government units, investing financial resources in local infrastructure and services and improving on sustainable basis the primary economic and social services for the local population (communities). MDF is designated as an implementing entity for the RDP III and is responsible for its day-to-day management, including application of the environmental and social safeguard policies.

MDF prepares and submits to the World Bank for approval the Subproject Appraisal Reports (SARs), with safeguards documents attached. These may include, as case may be, an Environmental Review (ER) along with an Environmental Management Plan (EMP), an EMP prepared using the Environmental Management Checklist for Small Construction and Rehabilitation Activities, and a Resettlement Action Plan (RAP).

According to the “Investment Financing Agreement between Municipal Development Fund of Georgia and Self-governing Body of Aspindza Municipality”, Apindza Municipality will be responsible for maintenance of the visitor center, public-toilet, recreational platform and parking area. National Agency for Cultural Heritage Preservation of Georgia will be responsible for maintenance of vertical handrails based on the “Investment Financing Agreement between Municipal Development Fund of Georgia and National Agency for Cultural Heritage Preservation of Georgia”.

1.3 Legislation and Regulations

According to the law of Georgia on Permit on Environmental Impact (2008) the SP does not require preparation of EIA and obtaining of Permit on Environmental Impact.
The SP triggers to the OP/BP 4.01 Environmental Assessment and OP/BP 4.11 Physical Cultural Resources safeguard policies.

According to the above mentioned safeguard policies and the Environmental Management Framework adopted for the current program, the SP has been classified as B (+) category and requires preparation of Environmental Review (ER) and environmental Management Plan (EMP), in complies with recommendations of Environmental Management Framework (EMF).

2. Subproject description

The Sub-Project (SP) on Arrangement of Tourism Infrastructure and Safety Measures at Vani Kvabebi (Caves) Complex envisages:

- Arrangement of visitor center and public toilet;
- Arrangement of parking area;
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The SP envisages implementation of the following works:

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According to the “Investment Financing Agreement between Municipal Development Fund of Georgia and Self-governing Body of Aspindza Municipality”, Apindza Municipality will be responsible for maintenance of the visitor center, public-toilet, recreational platform and parking area. National Agency for Cultural Heritage Preservation of Georgia will be responsible for maintenance of vertical handrails based on the “Investment Financing Agreement between Municipal Development Fund of Georgia and National Agency for Cultural Heritage Preservation of Georgia”.

3. **Baseline Environmental Conditions**

The SP site is located in Aspindze Municipality, Southern Georgia, at 260 km distance from Tbilisi and 30 km distance from town Aspindza. The Vani Caves complex dates from 8th century and consists of a defensive wall built in 1204 and a maze of tunnels running on several levels in the side of the mountain. Vani Caves include 200 caves carved in the rock (cells, anterooms, burial site, asylum, support stock rooms, communication caves and 6 churches) which are arranged in 16 floors. Water pool and remnants of 3 tracks of running water are extant. Archeological excavations have discovered eight wine cellars. On the last floor of Vani Caves, on the
walls of a built-in church there are extant fresco painting of XII-XIII centuries, including two lines from Shota Rustaveli’s epic poem The Knight in the Panther’s Skin. There are also two churches in the complex. A newer stone church that is in quite good shape stands near the top of the wall, and a smaller, domed church is clings from the rock on the level of the highest tunnels. The Caves represent cultural heritage monument.

The geological-engineering study of the area showed that on the SP site and territories in adjacent area to them are stable and are in satisfying geological engineering condition.

The average annual temperature in the region is 9.0°C, average temperature in January is -2°C, in August - 20.0°C, annual precipitation is 500-580 mm.

Landscape is modified because of the anthropogenic influence; Nearby area of the monument is not populated. There is only a monk monastery complex. Nowadays, adjacent to the Vani Kvabebi (caves) there is no tourist infrastructure, parking area, that is hindering for development of tourism in this area.

4 Potential Impacts

4.1 Construction Phase

4.1.1. Social Impacts

3. General set of social issues. No significant social issues are associated with implementation and operation of this SP.

4. Resettlement Issues. The SP does not entail private land acquisition and no impacts are envisaged on private or leased agricultural lands and private assets or businesses.

5. Positive impact related to Job opportunities for construction workers. Limited and temporary during construction and limited during operation.


7. Traffic Disruption. Local traffic can be impacted limited and temporary by transport activities related to the SP.

8. Safety and Access. There will be reduced access to areas adjacent to rehabilitation and potential hazards to vehicles and pedestrians during rehabilitation downtime.

4.1.2. Impacts on the Physical Cultural Property

The SP envisages implementation of works in the area of Vani Caves Complex. These works include arrangement of the visitor center, car parking, public toilet, recreational platform and ensuring of safety measure.

Therefore, the risk of negative impacts on the structural integrity and historical value of the complex is minimal. In course of rehabilitation and construction activities, especially during soil excavation works, chance finds may be encountered. In such cases, works will be immediately taken on hold and the Ministry of Culture and Monument Protection will be informed. Works may resume only upon formal permission from the National Agency for Cultural Heritage Preservation.

Operational phase risks are related to management of visitation, preventing vandalism on site, maintenance of water supply and sanitation systems, and household waste management.
4.1.3. Environmental Impacts

Soil Pollution

Potential pollutants from a SP of this nature include the following (this list is not exhaustive):

- Diesel fuel, lubrication oils and hydraulic fluids, antifreeze, etc. from construction vehicles and machinery;
- Miscellaneous pollutants (e.g. cement and concrete);
- Construction wastes (packaging, stones and gravel, cement and concrete residue, wood, etc.).

Water Pollution

Water pollution may result from a variety of sources, including the following:

- Spillages of fuel, oil or other hazardous substance, especially during refuelling;
- Releasing silt water from excavations;
- Silt suspended in runoff waters (“construction water”);
- Washing of vehicles or equipment;
- Exposure of contaminated land and groundwater;
- Impact on surface and/or underground water with chlorine-containing waste water that are expected to be formed in washing and disinfection process before launching operation of newly installed water pipes.

Spillages 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. It is therefore vital that prompt action is taken in the event of any potential water pollution incident.

Once the working width has been stripped of topsoil, the subsoil becomes exposed. During earthworks in a wet weather this may result in uncontrolled release of suspended solids from the work area.

Air Pollution and Noise

Potential impact of air pollution is minimal and related to operation of vehicles and heavy machinery at the construction site and during transportation of materials.

- Noise and vibration arising from heavy machinery and vehicles;
- Air emissions (from vehicles, bulldozers, excavators etc.);
- Dust (from vehicles);
- Fumes may be a concern linked to supply and transportation of materials.

Construction Related Wastes

Construction Wastes
The following types of inert waste are anticipated to be produced from these activities:

- Natural materials (soil and rock);
- Contaminated soil with non-hazardous substance or objects;
- Inert materials generated due to the demolition works within the Monastery are (tiles, stones, white brick, wood);
- Packaging materials;
- Metals (including scrap metal and wire) – negligible amount of metal waste is expected;
- Debris and domestic waste located on the area for tourist infrastructure arrangement.

**Hazardous Construction Wastes**

Small quantities of the hazardous wastes will arise mainly from the vehicle maintenance activities. A number of hazardous wastes, which could be generated, include:

- liquid fuels;
- lubricants, hydraulic oils;
- chemicals, such as anti-freeze;
- contaminated soil;
- spillage control materials used to absorb oil and chemical spillages;
- machine/engine filter cartridges;
- Oily rags, spent filters, contaminated soil, etc.).

**Transport related impacts**

- Noise & Vibration Impacts;
- Traffic congestion (nuisance);
- Air pollution;
- Mud on roads;
- Refuelling, maintenance and vehicle cleaning and related risks of soil and water contamination.

**Topsoil losses due to topsoil stripping**

- Topsoil washout due to improper storage and reinstatement;
- Silt runoff to watercourses and water bodies;
- Exposure of contaminated land.

**4.2 Operation Phase**

Potential impact related to the operation of the provided light infrastructure would be the following:

- Increase of the number of tourists will result in the increased volume of waste and noise;
- The traffic will increase in adjacent area of CH sites, which will result in the increased level of local emissions and noise as well as traffic safety issues;
- Tours of sites of worshipping may conflict with local traditions and/or religious beliefs.
The potential risk of pollution is related to disruption of wastewater treatment process due to not proper operation and maintenance of the wastewater treatment units.

According to the “Investment Financing Agreement between Municipal Development Fund of Georgia and Self-governing Body of Aspindza Municipality”, Apindza Municipality will be responsible for maintenance of the visitor center, public-toilet, recreational platform and parking area. National Agency for Cultural Heritage Preservation of Georgia will be responsible for maintenance of vertical handrails based on the “Investment Financing Agreement between Municipal Development Fund of Georgia and National Agency for Cultural Heritage Preservation of Georgia”. Positive social impact will be related to the increasing of the touristic infrastructure that will have positive effect on the local population, in terms of employment.

5. Environmental Management Plan

This Environmental Management Plan (EMP) has been prepared to ensure that negative environmental impacts associated with this SP are minimized.

The contractor is required:

1. To obtain construction materials only from licensed providers;
2. 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 inert material extraction;
3. If contractor wishes to operate own asphalt (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;
4. If contractor wishes to operate own concrete plant (rather than purchasing these materials from other providers), then the contractor must prepare technical report on inventory of atmospheric air pollution stationary source and agree with the Ministry of Environment and Natural Resources Protection (MoENRP);
5. Construction waste must be disposed on the land plots (in accordance with letter from Aspindza Municipality. The records of waste disposal will be maintained as proof for proper management as designed.
6. If over 200 tons of non-hazardous waste or over 1000 tons of inert materials or 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 Protection of Georgia to approve the Waste Inventory 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.
7. Wastewater treatment unit to be arranged within the SP shall ensure treatment of wastewater in compliance with the requirements of the “Technical regulation for discharging effluent from industrial and non-industrial facilities into surface water bodies” adopted by the Resolution #17 of the Government of Georgia of January, 2014.

According to the Governmental decree #136, 11.08.05 underground fresh water extraction license must be obtained after completing construction/rehabilitation works by the local municipality administration as responsible authority for the operation of water supply system and license conditions should be adhered to.

Copies of extraction licenses (if applicable), agreed technical report on inventory of atmospheric air pollution for operating concrete plants (if applicable), and waste disposal agreement must be submitted to the MDF prior to the commencement of works.

GOST and SNIP norms must be adhered.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Expected Negative Impact</th>
<th>Mitigation Measure</th>
<th>Responsible for implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Construction Phase</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtaining of required permits/licenses and concluding agreements</td>
<td>Disruption of construction works due to sanctions from regulatory bodies against construction contractor resulting from the absence of required documents; Damage to the environment cause by unauthorized use of natural resources and unregulated discard of waste</td>
<td>The following permits/licenses and agreements should be obtained by the works contractor and submitted to the MDF: – Agreement for disposal (stockpiling) of excessive soil – licenses for inert material extraction – Permits for production of such construction materials that belongs to the activity subject to ecological examination – Technical report on inventory of atmospheric air pollution stationary source and agree with the Ministry of Environment and Natural Resources Protection (MoENRP) - Agreement on household and construction waste disposal on the Aspindza landfill.</td>
<td>Construction contractor</td>
</tr>
<tr>
<td>Notification of the local community on upcoming activities</td>
<td>Hostile attitude of local communities and possible conflict leading to disruption of works. Inconvenience to local community from unexpected presence and activity of construction contractor</td>
<td>- Place informational banner on the construction site carrying contact information about MDF, as well as works supervisor company and local municipality administration. - Make the banner from weather resistant material. - Provide information in Georgian and English languages. - Notify local community and other interested parties about the scope and timing of the upcoming works</td>
<td>Construction contractor</td>
</tr>
<tr>
<td>Institutional arrangements for implementation of environmental mitigation measures</td>
<td>Poor environmental and social performance of construction contractor Occurrence of work-site trauma and other health damage due to poor understanding of health and safety rules by personnel</td>
<td>- Appointing a person responsible for protection of social and natural environment and ESMP implementation (environmental manager) - Acquainting workers with ESMP and training them in social and environmental good practice, including health and safety rules</td>
<td>Construction contractor</td>
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<tr>
<td><strong>Construction Phase</strong></td>
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<tr>
<td>Construction works, including: Deterioration of ambient air</td>
<td>– All vehicles shall be maintained so that their emissions do not cause</td>
<td></td>
<td>Construction</td>
</tr>
<tr>
<td>Activity</td>
<td>Expected Negative Impact</td>
<td>Mitigation Measure</td>
<td>Responsible for implementation</td>
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<tr>
<td>- Preparation of construction sites</td>
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<td>nuisance to workers or local people. All vehicles shall be checked and repaired in case of need to eliminate increased level of noise due to damaged parts;</td>
<td>contractor</td>
</tr>
<tr>
<td>- Earth works</td>
<td></td>
<td>- Regular maintenance of diesel engines shall be undertaken to ensure that emissions are minimized, for example by cleaning fuel injectors. All plant used on site shall be regularly maintained so as to be in good working order at all times to minimize potentially polluting exhaust emissions;</td>
<td>contractor</td>
</tr>
<tr>
<td>- Installation of facilities</td>
<td></td>
<td>- Vehicle refueling shall be undertaken so as to avoid fugitive emissions of volatile organic compounds through the use of fuel nozzles and pumps and enclosed tanks (no open containers will be used to stored fuel);</td>
<td>contractor</td>
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<tr>
<td>- Machinery operations</td>
<td></td>
<td>- Materials transported to site shall be covered/ wetted down to reduce dust. The construction site shall be watered as appropriate. Protective equipment shall be provided to workers as necessary;</td>
<td>contractor</td>
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<td>- Transportation operations</td>
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<td>- During demolition works destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site;</td>
<td>contractor</td>
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<td>- The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust;</td>
<td>contractor</td>
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<td>- earth works shall be suspended during strong winds;</td>
<td>contractor</td>
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<td>- Construction materials and storage piles shall be covered;</td>
<td>contractor</td>
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<td>- Stripped soil/ excavated ground shall be stockpiled properly;</td>
<td>contractor</td>
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<td>- There shall be no open burning of construction / waste material at the site;</td>
<td>contractor</td>
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<td>- There shall be no excessive idling of construction vehicles at sites;</td>
<td>contractor</td>
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<td></td>
<td>- The SP territory shall be reinstatement immediately after finalizing of construction works.</td>
<td>contractor</td>
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<td>Activity</td>
<td>Expected Negative Impact</td>
<td>Mitigation Measure</td>
<td>Responsible for implementation</td>
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</table>
| Propagation of noise and vibration | − The maximum speed shall be restricted in residential areas to the safety level during the pass of the trucks;  
− Proper technical control and maintenance practices of the machinery shall be applied;  
− Activities shall be limited to daylight working hours;  
− No-load operations of the vehicles and heavy machinery are not allowed. Proper mufflers will be used on machinery;  
− Ensure that machinery is in good technical condition. | Construction contractor                                                        |                                |
| Damage of soil                  | − Demarcation of construction sites’ boundaries and access roads before construction works are launched;  
− Adherence to demarcated work site boundaries during operations;  
− Stripping of topsoil from work sites (whenever possible) before starting of earthworks and stockpiling for subsequent reinstatement, in compliance with the Technical Regulations on Stripping, Stockpiling, Use and Reinstatement of Topsoil (2014);  
− Topsoil shall be stored in stockpiles, no more than 2m high with side slopes at a maximum angle of 45°. The following shall also be taken into consideration:  
  • Dedicated storage locations shall be used that prevents the stockpiles being compacted by vehicle movements or contaminated by other materials;  
  • Topsoil shall be segregated from subsoil stockpiles;  
  • No material shall be stored where there is a potential for flooding;  
  • No storage at less than 25m from river/streams, subject to the site specific topography;  
− Topsoil stripping during heavy rains will not be allowed;  
− Stored topsoil shall be used for reinstatement and landscaping of the SP area immediately after completion of construction works. | Construction contractor |
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<th>Activity</th>
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|          |                          | appropriate, this may include leveling of ground surface, reinstatement of topsoil and measures to facilitate natural recovery of vegetation; Topsoil from the sites, which will not be reinstated to the initial conditions shall be distributed carefully on the surrounding area;  
- In the event that the stockpiles experience significant erosion the contractor will be required to implement corrective action, such as installing erosion matting over the stockpiles if further surface compaction and/or topsoil seeding fails. The Contractor shall protect the stockpiles from flooding and run-off by placing berms or equivalent around the outside where necessary;  
- subsoil shall be stored in stockpiles, no more than 3m high with side slopes at a maximum angle of 60°; dedicated storage locations shall be used that prevents the stockpiles being compacted by vehicle movements or contaminated by other materials; subsoil shall be segregated from topsoil stockpiles. |
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<th>Mitigation Measure</th>
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<tr>
<td>Water and soil pollution</td>
<td>– Provision of staff with toilets and bathrooms, and centralized discharge of generated wastewater in the sewer systems if possible or install temporary structures;</td>
<td>– Ensuring that machinery are well maintained; – Refueling of machinery using respectively equipped refueling trucks, and using of drip trays during refueling operations; – Refueling and maintenance of machinery only at a specially devoted site, where topsoil is tripped and grovel layer is arranged; lubricants, fuel and solvents shall be stored exclusively in the designated sites; No fuel, lubricants and solvents storage or re-fuelling of vehicles or equipment will be allowed near the cultural heritage site; – Ensuring that construction materials are appropriately stockpiled and stored in the specially designated and temporarily constructed storage facilities; – Temporarily storage on site of all hazardous or toxic substances shall be in safe containers labeled with details of composition, properties and handling information; Spill containment materials (sorbents, sand, sawing, chips etc.) should be available on construction site; – Ensure that all spills are cleaned up immediately, and contaminated soil is respectively disposed of; – Wet cement and/or concrete will not be allowed to enter any watercourse, pond or ditch. – Cleaning up of the entire SP territory from construction waste as soon as the construction works are finalized.</td>
<td>Construction contractor</td>
</tr>
<tr>
<td>Pollution of environment by solid and liquid wastes</td>
<td>– Burning of waste is prohibited; – Paints with toxic ingredients or solvents or lead-based paints shall not be used. – Different types of waste (construction, hazardous, household) shall be collected separately; special sites shall be designated for waste accumulation and pollution prevention measures</td>
<td></td>
<td>Construction contractor</td>
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<td>Activity</td>
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<td>shall be applied there;</td>
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<td>– Construction inert waste and excess soil should be disposed on territory allocated by the Aspindza Municipality;</td>
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<td>– Temporarily storage of all hazardous or toxic substances shall be in safe containers labelled with details of composition, properties and handling information; Uncontrolled storage of hazardous wastes on the construction area is prohibited; the containers of hazardous substances shall be placed in a leak-proof container to prevent spillage and leaching; shall be handed over to a permitted waste management company, on a contractual basis;</td>
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<td>– Any construction or municipal wastes produced during construction stage should remove from the site area frequently;</td>
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<td>– Agreements on the disposal of waste shall be obtained prior disposal is undertaken;</td>
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<td>– Upon completion of washing and disinfection of pipes and reservoirs the disinfection solution will be neutralized by the contractor prior to release to the environment – to avoid damage to terrestrial or aquatic organisms. In the case of disinfection via chlorination this is achieved by application of a reducing agent, such as sodium bisulfate to achieve de-chlorination. The reducing agent, in turn, must be applied by the contractor at the precise dosage to neutralize the disinfectant – but no more, since reducing agent residuals are also detrimental to aquatic ecosystems.</td>
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<td>Impact on traffic flow</td>
<td>– Impose speed limitation to the SP machinery;</td>
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<td>Construction contractor</td>
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<td>– Ensure that SP machinery move using only pre-determined routes;</td>
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<td>– The frequency of machinery movement shall be restricted.</td>
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</table>
| Health and safety risks for local community | - Construction site shall be properly secured and construction related traffic regulated. This includes but is not limited to:  
  - Installation of the signposting, warning signs, barriers and traffic diversions: signs shall be clearly visible and the public warned of all potential hazards;  
  - Construction site and all trenches shall be fenced and properly secured to prevent unauthorized access (especially of children);  
  - Appropriate lighting should be provided;  
  - Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement;  
  - Imposing of speed limitation to SP machinery  
  - Ensuring that SP machinery move using only pre-determined routes | Construction contractor          |                                      |
| Damage to private property                   | - Ensuring that sub-project machinery move using only pre-determined routes;  
  - Imposing of speed limitation to the sub-project machinery;  
  - Incurred losses shall be fully compensated by the contractor. | Construction contractor          |                                      |
| Conflicts with local population or other affects people | - Meeting with local population (if required)  
  - Reception and addressing of complaints/grievances:  
    - Grievance Redress committee will be established at the municipal level with the following composition: authorized representative of Aspindza Municipality Sakrebulo and Gamgeoba, Head of the Social Service, person in charge of relations with the water supply company, representative of the local NGO.  
    - If the grievance will not unsolved at the local level, it will be lodged to the MDF.  
    - MDF registers all received compliances, comments and how the | Construction contractor          |                                      |
<table>
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<tr>
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<tr>
<td></td>
<td>compliance was addressed</td>
<td>- During public consultations, the local population will be informed about the grievance redress issues and received information about contact persons.</td>
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<td>- Informing of the SP labor about potential health and safety risks, and instructing them regarding safety measures to be adhered (before launching construction works and during civil works)</td>
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<td>- Ensuring that required personal protection equipment (e.g. helmets, gloves, etc.) is supplied and used by workers as appropriate</td>
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<td>- Ensure safety of machinery operations</td>
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<td>- Provision of safety signs for high risk zones</td>
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<td></td>
<td>- Implementation of measures recommended for air protection and noise abatement</td>
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<td></td>
<td>Impact on cultural heritage</td>
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<td>- Suspension of construction operations if archeological objects or artefacts are discovered during earth works, informing the MDF and Ministry of Culture and Monument Protection about the chance finding and resume works only after respective permission is issued;</td>
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<td></td>
<td>- Cleaning up and reinstatement of the SP area immediately after the construction works are completed.</td>
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<td>Operation Phase</td>
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<td>Activity</td>
<td>Expected Negative Impact</td>
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<tr>
<td>Operation of the tourist</td>
<td>Pollution of environment with solid waste and waste water</td>
<td>– Regularly deliver solid waste from the site to the land plots (according to the Aspindza Municipality letter);&lt;br&gt;– Burning of waste should not be practiced.&lt;br&gt;– Sewage collector systems and biological wastewater treatment facility should be maintained in good technical condition;&lt;br&gt;– Operations &amp; Maintenance Training (upon facility start-up and 4x seasonally during guarantee period) will be executed by works contractor, including supply of Operations Manual and preparation of Training Program (Summary Report).</td>
<td>Aspindza Municipality</td>
</tr>
</tbody>
</table>
6. Monitoring

MDF carries overall responsibility for monitoring of the implementation of the environmental mitigation measures. A consulting company hired for supervision of works will supplements MDF’s in-house capacity for tracking environmental and social compliance of works undertaken under this SP. Field monitoring checklist will be filled out and photo material attached on monthly basis. Environmental monitoring of the SP shall be implemented according with plan given below.

Narrative reporting on the implementation of EMP will be provided on monthly and quarterly basis as part of the general progress reporting of MDF. MDF will also be expected to obtain from contractors and keep on file all permits, licenses, and agreement letters which contractors are required have according to the Georgian law for extracting material, operating asphalt/concrete plants, disposing various types of waste, etc.

7. Remedies for EMP Violation

MDF, as a client of construction works, will be responsible for enforcing compliance of contractor with the terms of the contract, including adherence to the EMP.

The contractor is obliged to carry out any of its activities pursuant to the Georgian Environmental Legislation in force, and in case if any noncompliance is revealed, the contractor shall be liable to cover at its own expense all damage liquidation costs.

8. Costs of Implementation

Costs of implementing the proposed mitigation measures are small and difficult to single out from the costs of construction operations. Nonetheless, it is recommended that Bill of Quantities presented in the tender documentation carry a line item for the disposal of waste and excess materials. Other costs of adherence to good environmental practice and compliance with this EMP are expected to be integrated into the pricing of various construction activities.

9. Grievance Redress Mechanism

Grievance Redress committee will be established at the municipal level. If the grievance will not unsolved at the local level, it will be lodged to the MDF. As for grievance monitoring MDF registers all received compliances, comments and how the compliance was addressed. During public consultations, the local population was informed about the grievance redress issues and received information about contact persons.

In addition, contractor is obliged to place informational banner on the construction site carrying contact information about contact persons of MDF, works Supervisor Company and local municipality administration. The banner will be made with weather resistant material and provide information in Georgian and English languages.
<table>
<thead>
<tr>
<th>Activity</th>
<th>What (Is the parameter to be monitored?)</th>
<th>Where (Is the parameter to be monitored?)</th>
<th>How (Is the parameter to be monitored?)</th>
<th>When (Define the frequency / or continuous?)</th>
<th>Why (Is the parameter being monitored?)</th>
<th>Who (Is responsible for monitoring?)</th>
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<tbody>
<tr>
<td>Pre-Construction Phase</td>
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<tr>
<td>Obtaining of agreements / permits</td>
<td>Purchase of construction materials from the officially registered suppliers and agreement for waste disposal</td>
<td>In the works contractor’s office or warehouse</td>
<td>Verification of documents and inspection</td>
<td>Prior to commencement of civil works</td>
<td>To ensure technical reliability and safety of infrastructure, Prevent pollution of the construction site and nearby area with waste</td>
<td>MDF, Construction supervisor</td>
</tr>
<tr>
<td>Notification of the local community on upcoming activities</td>
<td>Placement of informational banner and accuracy of provided information</td>
<td>Construction site</td>
<td>Inspection</td>
<td>Prior to commencement of civil works</td>
<td>To ensure local population are informed about the planned SP and contact persons from MDF, works supervisor company and local municipality administration</td>
<td>MDF, Construction supervisor</td>
</tr>
<tr>
<td>Institutional arrangements for implementation of environmental mitigation measures</td>
<td>Responsible person for protection of social and natural environment and ESMP implementation (environmental manager); Trained workers in social and environmental good practice, including health and safety rules</td>
<td>In the works contractor’s office or warehouse</td>
<td>Construction site</td>
<td>Inspection</td>
<td>Prior to commencement of civil works</td>
<td>MDF, Construction supervisor</td>
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<tr>
<td>CONSTRUCTION PHASE</td>
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<tr>
<td>Supply with construction materials</td>
<td>Purchase of construction materials from the officially registered suppliers</td>
<td>In the supplier’s office or warehouse</td>
<td>Verification of documents</td>
<td>During conclusion of the supply contracts</td>
<td>To ensure technical reliability and safety of infrastructure</td>
<td>MDF, Construction supervisor</td>
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<tr>
<td>Activity</td>
<td>What (Is the parameter to be monitored?)</td>
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<tr>
<td>Transportation of construction materials and waste</td>
<td>Technical condition of vehicles and machinery</td>
<td>Construction site</td>
<td>Inspection</td>
<td>Unannounced inspections during work hours and beyond</td>
<td>Limit pollution of soil and air from emissions;</td>
<td>MDF, Construction supervisor, Traffic Police</td>
</tr>
<tr>
<td>Movement of construction machinery</td>
<td>Confinement and protection of truck loads with lining</td>
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<td>Limit nuisance to local communities from noise and vibration;</td>
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<td></td>
<td>Respect of the established hours and routes of transportation</td>
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<td>Minimize traffic disruption.</td>
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<tr>
<td>Earthworks</td>
<td>Temporary storage of excavated material in the pre-defined and agreed upon locations;</td>
<td>Construction site</td>
<td>Inspection</td>
<td>In the course of earth works</td>
<td>Prevent pollution of the construction site and its surroundings with construction waste;</td>
<td>MDF, Construction supervisor</td>
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<tr>
<td></td>
<td>Backfilling of the excavated material and/or its disposal to the formally designated locations;</td>
<td></td>
<td>Permanent oversight by archaeologists</td>
<td></td>
<td>Prevent damage and loss of physical cultural resources</td>
<td>Aspindza Municipality</td>
</tr>
<tr>
<td>Sourcing of inert material</td>
<td>Purchase of material from the existing suppliers if feasible;</td>
<td>Borrowing areas</td>
<td>Inspection of documents</td>
<td>In the course of material extraction</td>
<td>Limiting erosion of slopes and degradation of ecosystems and landscapes;</td>
<td>MDF, Construction supervisor</td>
</tr>
<tr>
<td></td>
<td>Obtaining of extraction license by the works contract and strict compliance with the license conditions;</td>
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<td>Inspection of works</td>
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<td>Limiting erosion of river banks, water pollution with suspended particles and disruption of aquatic life.</td>
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<td>Terracing of the borrow area,</td>
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<td>Activity</td>
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<tr>
<td>Backfilling to the exploited areas of the borrow site, and landscape harmonization; 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.</td>
<td>Construction site; Waste disposal site</td>
<td>Inspection</td>
<td>Periodically during construction and upon complaints</td>
<td>Prevent pollution of the construction site and nearby area with solid waste</td>
<td>MDF, Construction supervisor</td>
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</tr>
<tr>
<td>Generation of construction waste</td>
<td>Temporary storage of construction waste in especially allocated areas; Timely disposal of waste to the formally designated locations</td>
<td>Construction site; Waste disposal site</td>
<td>Inspection</td>
<td>Prevent pollution of the construction site and nearby area with solid waste</td>
<td>MDF, Construction supervisor</td>
<td></td>
</tr>
<tr>
<td>Trafic disruption and limitation of pedestrian Access</td>
<td>Installation of traffic limitation/diversion signage; Storage of construction materials and temporary placement of construction waste in a way preventing congestion of access roads</td>
<td>At and around the construction site</td>
<td>Inspection</td>
<td>Prevent traffic accidents; Limit nuisance to local residents</td>
<td>MDF, Construction supervisor</td>
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<tr>
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<tr>
<td>Workers’ health and safety</td>
<td>Provision of uniforms and safety gear to workers; Informing of workers and personnel on the personal safety rules and instructions for operating machinery/equipment, and strict compliance with these rules/instructions</td>
<td>Construction site</td>
<td>Inspection</td>
<td>Unannounced inspections in the course of work</td>
<td>Limit occurrence of on-the-job accidents and emergencies</td>
<td>MDF, Construction supervisor</td>
</tr>
<tr>
<td>Management of the solid waste</td>
<td>Trash bins provided on site and arrangement in place for timely regular out-transporting of waste</td>
<td>Rehabilitated facilities</td>
<td>Inspection</td>
<td>During operation of facilities</td>
<td>Prevent littering of the site and area around it</td>
<td>Aspindza Municipality Authorities</td>
</tr>
<tr>
<td>Maintenance and protection of the site after the rehabilitation</td>
<td>No unauthorized construction and no informal land use in the vicinity of Vardzia Complex</td>
<td>Rehabilitated facilities</td>
<td>Inspection</td>
<td>During operation of facilities</td>
<td>Prevent loss of the historical and aesthetic values of the site and surrounding area</td>
<td>Aspindza National Agency for Cultural Heritage Protection</td>
</tr>
<tr>
<td>Servicing of water supply scheme and sewage treatment unit</td>
<td>Water supply scheme does not leak and water supply uninterrupted Sewage treatment block operate smoothly</td>
<td>Rehabilitated facilities</td>
<td>Inspection</td>
<td>During operation of facilities</td>
<td>Prevent water loss and water logging of the site Prevent pollution of surface and ground water with untreated sewage</td>
<td>Aspindza Municipality Authorities</td>
</tr>
</tbody>
</table>
Attachment 1. Cadastral information, Orthophoto and pictures of the site

- Location of bus parking area
- Location of the visitor center, public toilet, borehole and wastewater treatment unit
- Location of car parking area
- Location of recreational area
Land allocated for visitor center and public-toilet
Land allocated for recreational platform

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- Land allocated for recreational platform

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Bus Parking area
Visitor center, public-toilet and parking area
Location of Borehole and wastewater treatment unit

- Wastewater treatment unit
- Borehole
- Water Reservoir
Arrangement of Tourism Infrastructure at Vani Kvabebi (Caves)

Minutes of Public Consultation Meeting of Social and Environmental Review

In order to discuss environmental documentation (Social and Environmental Review) prepared for the sub-project- “Arrangement of Tourism Infrastructure at Vani Kvabebi (caves)”, on July 7, 2017 a public consultation meeting was conducted in the Administration building of Aspindza Municipal Gamgeoba.

The meeting aimed at keeping stakeholders abreast of the sub-project related planned activities, the expected negative impacts on the natural and social environment and the ways and means of preventing them.

Those present at the meeting:


Niniko Isakadze, Environmental Safeguard Specialist, opened the meeting, she informed the attendees about the MDF, purpose of the meeting, main goals of the sub-project and the planned envisaged under the SP. In the process of the meeting, she conducted presentation of the Social and Environmental Review and Social and Environmental Management Plan prepared for the sub-project. She shortly explained to the public about the social and environmental screening procedures applied for the WB and environmental and social requirements of the presented SP. There were discussed also the mitigation measures in order to minimize the potential negative impacts which may arise during the SP implementation process. N. Isakadze mentioned that according to the Georgian law on Environmental Impact Permit the SP does not require any kind of permits and agreements with the Ministry of Environment and Natural Resources protection and/or obtaining of Environmental Impact Permit. Due to the above-mentioned fact, and to ensure environmental and social safety of the SP, MDF is responsible for implementation of all environmental and social procedures in accordance with the WB safeguard policies.
N. Isakadze discussed the structure and content of Social and Environmental Review. She noted that ER forms an integral part of the contract made with the civil works contractor. The last one is obliged thoroughly implementation of the measures specified in the ER to protect social and natural environment. She also discussed the environmental monitoring criteria, responsible parties for the environmental supervision and reporting procedures during the sub-project implementation.

N. Isakadze informed the participants about the contact persons for communication, in case of existence of any complaints concerning environmental or social issues.

After the presentation, the audience was given a possibility to 40xpress their opinions and/or participate in Q&A session concerning presented issues, they posed the following question:

<table>
<thead>
<tr>
<th>Questions and remarks</th>
<th>Answers and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who will be responsible for maintenance of the infrastructure after completion of construction activities?</td>
<td>According to the “Investment Financing Agreement between Municipal Development Fund of Georgia and Self-governing Body of Aspindza Municipality”, Apindza Municipality will be responsible for maintenance of the visitor center, public-toilet, recreational platform and parking area. National Agency for Cultural Heritage Preservation of Georgia will be responsible for maintenance of vertical handrails based on the Investment Financing Agreement between Municipal Development Fund of Georgia and National Agency for Cultural Heritage Preservation of Georgia.</td>
</tr>
<tr>
<td>Where does the wastewater discharged from the building?</td>
<td>The wastewater system of the building will be connected to the wastewater treatment unit (volume 8 m³/day), which will be located on the backside of the building. Treated water from the treatment facility will be discharged into the adjacent ravine.</td>
</tr>
<tr>
<td>Does the treated water have any negative effect on the environment?</td>
<td>Treated water will not have any negative impact on the local environment. The Technical characteristics of treating facility and treatment data do not exceed the norms established by the environmental technical regulation approved by Resolution No. 17, January 3, 2014 of Georgian Government.</td>
</tr>
<tr>
<td>Does the SP envisage arrangement of handrails along the stairs? What will the height of handrails be?</td>
<td>Within the SP, arrangement of handrails (119m) along the right path and at the both side of the staircase is planned. The height of the handrails will be 1 meter.</td>
</tr>
</tbody>
</table>
At the end of the meeting the audience expressed their positive attitude towards the project and the mitigation measures proposed in the environmental documentation.

Photo materials and copy of registration list of meeting attendances are hereby enclosed.

Minutes was prepared by Niniko Isakadze
Registration list of attendees

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Address</th>
<th>Phone</th>
<th>Other details</th>
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<td>ალექსე გუაშეთიძიძი</td>
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Photo material