FINAL ENVIRONMENTAL AND SOCIAL REVIEW CHECKLIST

Micro-project title: Reconstruction of water supply system in Varagavan Community

Micro-project #: TTV-14

Is the Environmental and Social Management Plan (ESMP) developed?

Yes +  No _____

Does ESMP provide a full list of potential impacts and establish adequate measures for their mitigation?

Yes +  No _____

Conclusion of the Final Environmental and Social Assessment

<table>
<thead>
<tr>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro-project rejected</td>
</tr>
<tr>
<td>Micro-project approved (environmental assessment completed)</td>
</tr>
</tbody>
</table>

+
## INSTITUTIONAL & ADMINISTRATIVE

<table>
<thead>
<tr>
<th>Micro-project number and title</th>
<th>TTV-14 Reconstruction of water supply system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality, community</td>
<td>Tavushi marz, Varagavan Community</td>
</tr>
</tbody>
</table>

**Scope of site-specific activity**

The village's water supply is mainly provided by four water pipes.

1. Water supplies from the sources of "Pugur Dalhani" and "Mamhuti" to the eastern part of the village and provides 55 houses.
2. From the source "Novavor" water supply takes place in the northern part of the village and provides 50 houses.
3. Water supply from the source "Tagug", from which it was distributed in 30-35 houses.
4. The source of "Geghateghi", which meets the needs of water in 15 houses below the Paravakar-Tsakhkavan highway.

The present micro-project TTV-14 will finance reconstruction of the source named "Novavor": construction of DRR, construction of water pipes from this source up to the DRR area; construction of a distribution network and construction of sanitary zones in the area of sources and DRR. Earlier, ATDF prepared and started implementation (on 09.02.2016) of the micro-project TTV-12, also aimed at the improvement of water supply in Varagavan village. As of today, 57% of the works are implemented under TTL-12: all earthworks are finished and works for the repair the water intake and sanitary zone are underway. The two micro-projects were prepared and processed separately, because the village of Varagavan is located in a difficult, inaccessible terrain. All four sources of potable water are located in different sites, isolated from each other by the natural landscape. Source "Novavor" to be reconstructed under the present micro-project, is located in the opposite direction from the source "Small Dalkhan" being addressed through micro-project TTV-12. The implementation of micro-project TTV-14 will provide full and equal coverage of Varagavan village residents with water supply service.

**Institutional arrangements (WB)**

<table>
<thead>
<tr>
<th>Task Team Leader</th>
<th>Safeguards Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erkin Mamadaliev</td>
<td>Darejan Kapanadze - Environment</td>
</tr>
<tr>
<td></td>
<td>Sophia Georgieva - Social</td>
</tr>
</tbody>
</table>

**Implementation arrangements (RoA)**

<table>
<thead>
<tr>
<th>Implementing entity</th>
<th>Works Supervisor:</th>
<th>Works Contractor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATDF</td>
<td>“GAS” LTD</td>
<td>“Bazalt-EM” LTD</td>
</tr>
</tbody>
</table>

**SITE DESCRIPTION**

<table>
<thead>
<tr>
<th>Name of institution whose premises are to be rehabilitated</th>
<th>Water Department of Tavush marzpetaran (regional governor office), Varagavan potable water pipeline non-profit organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address and site location</td>
<td>Address: Tavushi marz, Varagavan village.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Who owns the land?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The land plots under capitulation of the source “Novavor” and its sanitary zone and proposed land plot for constriction of DRR and its sanitary zone are communal property. Total surface of land plot allocated for capitulation of the source and construction of sanitary zone is 4000 square meter. 1300 square meter land plot was allocated for construction of DRR and its sanitary zone. The proposed land plots are not formally or informally used by any private owner. Land allocation document is available (Annex 4). The entire route of pipelines starting from the source up to the DRR (2050 meter) passes through communal trail which is not covered by asphalt. The distribution network passes through the communal roads within the community (1730 meter). No resettlement issues are anticipated.</td>
</tr>
</tbody>
</table>
The land plots under capitation of the source “Novavor” and its sanitary zone and proposed land plot for construction of DRR and its sanitary zone are communal property. The proposed lands are not formally or informally used by any private entity. There are no trees, structures or other assets on the proposed lands. The entire route of pipelines starting from the source up to the DRR (2050 meter) and the distribution network passes through communal trails and roads. In one part the pipeline of distribution network crossed the communal road.

The temporary closure of the roads is not necessary as construction activities will be carried out at the border of the roads and main part of the road will be used for passing. As the construction activities of the distribution network will be carried out along the communal streets some temporary disturbance to residents may occur during the construction activities in front of the fences of private houses. Temporary safe wooden passings will be used to cover the trenches in front of the private houses. Backfilling of soil and rehabilitation of landscape will be carried out immediately pipes are laid in trenches.

Geological conditions are favorable for construction works. Physical-geological phenomena do not exist in the area. The ground waters are located deeper than the pipelines are proposed to be constructed. The precipitations in the area generally have surface flood, and only the part of the water penetrate through the minerals and soil. The natural relief and landscape will be recovered after construction works.

**LEGISLATION**

| National & local legislation & permits that apply to project activity | Construction of a new potable water pipeline is not subject to the Environmental Impact Assessment and to the issuance of the expert environmental review conclusion. According to the Armenian legislation, the following permissions are required for this micro-project:  
(a) Special permission of water use  
(b) Land allocation.  
(c) Construction permit (to be obtained) |

**PUBLIC CONSULTATION**

| When / where the public consultation process will take / took place | Public consultation was carried out in the village of Varagavan on 09.14.2017. |

**ATTACHMENTS**

- Attachment 1: Photos and plan of the construction site
- Attachment 2: Special permission for water use
- Attachment 3: Agreement for Waste Disposal
- Attachment 4: Land Allocation Document
- Attachment 5: Minutes of Public Consultation on the draft ESMP
- Attachment 6: Construction Permit
## PART B: SAFEGUARDS INFORMATION

### ENVIRONMENTAL /SOCIAL SCREENING

<table>
<thead>
<tr>
<th>Activity/Issue</th>
<th>Status</th>
<th>Triggered Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Reconstruction of water supply system</td>
<td>[+ Yes [ ] No</td>
<td>See Section A below</td>
</tr>
<tr>
<td>B. New construction</td>
<td>[+ Yes [ ] No</td>
<td>See Section A below</td>
</tr>
<tr>
<td>C. Individual wastewater treatment system</td>
<td>[ ] Yes [+ No</td>
<td>See Section B below</td>
</tr>
<tr>
<td>D. Historic building(s) and districts</td>
<td>[ ] Yes [+ No</td>
<td>See Section C below</td>
</tr>
<tr>
<td>E. Acquisition of land&lt;sup&gt;1&lt;/sup&gt;</td>
<td>[ ] Yes [+ No</td>
<td>See Section D below</td>
</tr>
<tr>
<td>F. Hazardous or toxic materials&lt;sup&gt;2&lt;/sup&gt;</td>
<td>[ ] Yes [+ No</td>
<td>See Section E below</td>
</tr>
<tr>
<td>G. Impacts on forests and/or protected areas</td>
<td>[ ] Yes [+ No</td>
<td>See Section F below</td>
</tr>
<tr>
<td>H. Handling / management of medical waste</td>
<td>[ ] Yes [+ No</td>
<td>See Section G below</td>
</tr>
<tr>
<td>I. Traffic and Pedestrian Safety</td>
<td>[+ ] Yes [ ] No</td>
<td>See Section H below</td>
</tr>
</tbody>
</table>

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<sup>1</sup> Land acquisitions includes displacement of people, change of livelihood encroachment on private property this is to land that is purchased/transferred and affects people who are living and/or squatters and/or operate a business (kiosks) on land that is being acquired.

<sup>2</sup> Toxic /hazardous material includes but is not limited to asbestos, toxic paints, noxious solvents, removal of lead paint, etc.
# PART C: MITIGATION MEASURES

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>PARAMETER</th>
<th>MITIGATION MEASURES (provide costs where applicable)</th>
</tr>
</thead>
</table>
| **0. General Conditions** | Notification and Worker Safety | (a) The local construction and environment inspectorates and communities have been notified of upcoming activities  
(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)  
(c) All legally required permits have been acquired for construction  
(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.  
(e) Workers’ PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots)  
(f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow. |
| **A. General Construction Activities** | Air Quality | (a) During interior demolition debris-chutes shall be used above the first floor  
(b) Demolition debris shall be kept in controlled area and sprayed with water mist to reduce debris dust  
(c) During pneumatic drilling/wall destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site  
(d) The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust  
(e) There will be no open burning of construction / waste material at the site  
(f) There will be no excessive idling of construction vehicles at sites |
| | Noise | (a) Construction noise will be limited to restricted times agreed to in the permit  
(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 |
| | Water Quality | (a) The site will establish appropriate erosion and sediment control measures 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. |
| | Waste Management | (a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities.  
(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.  
(c) Construction waste will be collected and disposed properly by licensed collectors  
(d) The records of waste disposal will be maintained as proof for proper management as designed.  
(e) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos) |
| **B. Individual wastewater treatment system** | Water Quality | (a) The approach to handling sanitary wastes and wastewater from building sites must be approved by the local authorities  
(b) Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment  
(c) Monitoring of new wastewater systems (before/after) will be carried out  
(d) Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies. |
| **C. Historic building(s)** | Cultural Heritage | (a) If the building is a designated historic structure, very close to such a structure, or located in a designated historic district, notification shall be made and approvals/permits be obtained from local authorities and all construction activities planned and carried out in line with local and national legislation.  
(b) It shall be ensured that provisions are put in place so that artifacts or other possible “chance finds” encountered in excavation or construction are noted and registered, responsible officials contacted, and works activities delayed or modified to account for such finds. |
<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>PARAMETER</th>
<th>MITIGATION MEASURES CHECKLIST</th>
</tr>
</thead>
</table>
| D. Acquisition of land | Land Acquisition Plan/Framework | (a) If expropriation of land was not expected but is required, or if loss of access to income of legal or illegal users of land was not expected but may occur, that the Bank’s Task Team Leader shall be immediately consulted.  
(b) The approved Land Acquisition Plan/Framework (if required by the project) will be implemented |
| E. Toxic Materials | Asbestos management | (a) If asbestos is located on the project site, it shall be marked clearly as hazardous material  
(b) When possible the asbestos will be appropriately contained and sealed to minimize exposure  
(c) The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust  
(d) Asbestos will be handled and disposed by skilled & experienced professionals  
(e) If asbestos material is be stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately. Security measures will be taken against unauthorized removal from the site.  
(f) The removed asbestos will not be reused |
| E. Toxic / hazardous waste management | (a) Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information  
(b) The containers of hazardous substances shall be placed in an leak-proof container to prevent spillage and leaching  
(c) The wastes shall be transported by specially licensed carriers and disposed in a licensed facility.  
(d) Paints with toxic ingredients or solvents or lead-based paints will not be used |
| F. Affected forests, wetlands and/or protected areas | Protection | (a) All recognized natural habitats, wetlands and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities.  
(b) A survey and an inventory shall be made of large trees in the vicinity of the construction activity, large trees shall be marked and cordoned off with fencing, their root system protected, and any damage to the trees avoided  
(c) Adjacent wetlands and streams shall be protected from construction site run-off with appropriate erosion and sediment control feature to include by not limited to hay bales and silt fences  
(d) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas. |
| G. Disposal of medical waste | Infrastructure for medical waste management | (a) In compliance with national regulations the contractor will insure that newly constructed and/or rehabilitated health care facilities include sufficient infrastructure for medical waste handling and disposal; this includes and not limited to:  
▪ Special facilities for segregated healthcare waste (including soiled instruments “sharps”, and human tissue or fluids) from other waste disposal; and  
▪ Appropriate storage facilities for medical waste are in place; and  
▪ If the activity includes facility-based treatment, appropriate disposal options are in place and operational |
| H Traffic and Pedestrian Safety | Direct or indirect hazards to public traffic and pedestrians by construction activities | (a) 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  
▪ Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards  
▪ 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.  
▪ Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement  
▪ Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public.  
▪ Ensuring safe and continuous access to office facilities, shops and residences during renovation activities, if the buildings stay open for the public. |
Environmental Monitoring Plan for construction and operation phases.

<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>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTRUCTION PHASE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Supply of construction materials</td>
<td>Purchase of the construction materials from licensed providers</td>
<td>Offices and warehouses of material suppliers, and borrowing sites</td>
<td>Checking documents; Inspection of material quality</td>
<td>In the process of signing the agreements for material provision</td>
<td>Ensure technical quality of construction; Protect human health and environment</td>
<td>ATDF</td>
</tr>
<tr>
<td>2. Transportation of construction materials and waste</td>
<td>Technical condition of construction vehicles and machinery; Adequacy of the loading trucks for transported types of cargo, and canopy coverage of cargo transported in open trucks; Movement of construction vehicles and machinery along pre-defined routes</td>
<td>Routes for transportatio n of construction materials and construction wastes</td>
<td>Inspection of roads adjacent to the construction site and included in the agreed-upon routes of transportation</td>
<td>Unannounced checks during the working hours</td>
<td>Avoid air and road pollution with dust and solid matter; Reduce traffic disruption</td>
<td>ATDF, Municipality of the village of Varagavan</td>
</tr>
<tr>
<td>3. Generation of construction waste</td>
<td>Temporary storage of inert and hazardous wastes separately at the construction site and base (if applicable); Locations</td>
<td>Checking documents; Visual observation</td>
<td>Entire period of construction</td>
<td>Avoid pollution of the environment</td>
<td>ATDF, Municipality of the village of Varagavan</td>
<td></td>
</tr>
<tr>
<td>4. Accumulation of household waste</td>
<td>Provision of waste containers on-site; Agreement with local municipality for regular out-transporting of waste</td>
<td>Construction site and base (if applicable)</td>
<td>Visual inspection</td>
<td>Entire period of construction</td>
<td>Avoid pollution of soil and water with household waste</td>
<td>ATDF, Municipality of the village of Varagavan</td>
</tr>
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</tr>
<tr>
<td>5. Safety of labor</td>
<td>Provision of uniforms and protective gear to the contractor's personnel and enforcement of their use by contractor; Consistency with the rules of exploitation of the construction equipment and usage of private safety means</td>
<td>Construction site</td>
<td>Inspection of the activities</td>
<td>Entire period of construction</td>
<td>Reduce the probability of accidents</td>
<td>ATDF</td>
</tr>
<tr>
<td>6. Undertaking works within the settlement</td>
<td>Deparkation and fencing of work site; Timely backfilling of soil once pipes are laid in trenches; No parking of construction vehicles and machinery outside work site the way</td>
<td>Construction site and nearby area</td>
<td>Visual inspection</td>
<td>Entire period of construction</td>
<td>Reduce disruption of movement around the work site and decrease probability of accidents</td>
<td>ATDF, Municipality of the village of Varagavan</td>
</tr>
</tbody>
</table>
impeding free passage of traffic and pedestrians; No piling and no scattering of construction materials and waste outside the work site

<table>
<thead>
<tr>
<th>OPERATION PHASE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Ensuring smooth operation of water intakes, DDRs and pipeline</strong></td>
</tr>
<tr>
<td><strong>2. Ensuring quality of potable water supplied to the village</strong></td>
</tr>
</tbody>
</table>
Attachment 1: Photos and Plan of the Construction Site

Attachment 2: Special permission for water use

(Non-official translation of the above attached document)

Ministry of Nature Protection
Water Resources Management Agency
Water use permit N000180
2-2 J/K-S-l
Varagavan Community Administrative Office
RA Tavush Region
Signed and stamped by
Minister of Ministry of Nature Protection A. Minasyan
Head of Community A. Abrahanyan
Give on 01.08.2017
Is in force until 01.08.2020
Attachment 3: Agreement for construction waste disposal

Agreement on the disposal of construction waste

Agreement on the disposal of excess material (soil)

Non-official translation of the above attached document:

Non-official translation of the above attached document:

Reference

1. The following reference is given that within the framework of the reconstruction work of drinking water supply system in Varagavan Community implemented by Armenian Territorial Development Fund the generated waste will be transported to the “Asperavet handamas” landfill, which is situated 3 km away from the reconstruction site.

1. Excess material (soil), if any, will be taken from the area 2 km far from the construction site; the area name is “Khnhat” land plot.

Head of Community (signed) A. Abrahamyan
Community Council Decision on land allocation

15 August 2017, N 12-A

On allocation of communal land for construction of captations

Based on the 21th point of 18th article of Law on Local-self Governance and the decision of Head of Community the Community Council decides:

1. To allocate 0.4 hectare land plot for construction of sanitary zone for capitation. The capitation will be constructed at the place named “Hoser”, as well as 0.13 hectare land plot is allocated for construction of DRR.

2. The decision is valid after signing

Varagavan Community Council Members
1. Hovik Manucharyan
2. Varujan Manucharyan
3. Hayk Grigoryan
4. Samvel Abrahamyan

Head of Community A. Abrahamyan
Signed and sealed
A stakeholder consultation meeting on the draft Environmental and Social Management Plan (ESMP) for the construction of a Reconstruction of water supply system in Varagavan Community was held on September 14 in Varagavan, Tavushi Marz.

The announcement for the meeting in Armenian and English languages, including its date and time, was disclosed on the ATDF web page (www.atdf.am). Information on the meeting day and time was posted on information boards of Varagavan Community Administration Office; in addition the Administration conducted telephone calls to ensure participants’ attendance.

The public consultation was carried out by ATDF Environmental Specialist Asya Osipova. 18 participants were present at the meeting, among which 4 women.

At the very beginning, Head of the Community Mr. A. Abrahamyan introduced the main purpose of the consultation and ATDF specialists.

A. Osipova introduced the main purpose as well as World Bank requirements and Armenian legislation on conducting environmental and social assessment. She introduced ESMP for the construction of a Reconstruction of water supply system in Varagavan Community and outlined likely negative environmental impacts related to the Micro-project implementation. These include pollution of air, generation of construction waste.

Ms. Osipova explained what measures ATDF will apply to mitigate possible negative impacts, including construction waste transportation. It was mentioned that ESMP covers the issue of the transportation and disposal of construction wastes and excessive soil.

Since the construction site is located far from the Community, A. Osipova outlined that disturbance to community life due to construction activities is not anticipated. Technical supervisors on monthly basis will keep under control the fulfillment of all the environmental mitigation measures included in ESMP, and report the deviations to ATDF.

A. Osipova presented the main provisions of the ESMF concerning to the social aspects of the Project. She talked about possible social risks and ways of their mitigation. She emphasized that the project does not involve any resettlement as proposed area of the construction is public property; however she briefly introduced key features of Resettlement Policy Framework.

A. Osipova talked also about main socio-economic challenges including engagement of women, youth and vulnerable groups in distribution of benefits. She outlined that these groups should have equal opportunities to be engaged in project benefits. The concept was welcomed by participants,
who suggested involve constructors from the Community mentioning that it will reduce unemployment in Community and labor immigration for seasonal works.

A.Osipova explained mechanisms of public engagement and grievance redress mechanism (GRM) to be applied during project implementation. Elected grievance focal point at the community level Samvel Abrahamyan was introduced to the community members. A.Osipova explained the purpose of Focal points at local level and welcomed participants to apply to Mr. Abrahamyan in case of questions/feedback or grievances concerning to the project implementation.

A.Osipova informed the beneficiaries that they also have the option to contact ATDF directly to communicate their grievance if they are unable to, or do not wish to, go through the PIC grievance focal point. A.Osipova explained all the cannels of grievance submition involving e-mail address, hot line telephone number, postal address and web-site link and outlined that ATDF contact information is referred on the booklets delivered to the participants, as well as on the information desk already available in public visible places in the Community. A.Osipova introduced that information on Micro-project details permanently will be available on the information desks, as well as on-going announcements and references. She outlined that these will support to raising public awareness and early identification, assessment and resolution of complaints on Project activities.

A.Osipova outlined that the community currently has several essential issues. Particularly the majority of the households are socially disadvantaged. The residents have lack of financial resources to construct new houses for growing families. That is the reason why youth escape to marry which leads to demographic issues. Mr. A.Abrahamyan said that seasonal migration is also essential issue in the Community.

List of participants
Photos of Public Consultation
Non-official translation of the above attached document
Republic of Armenia
Tavush Region, Community Varagavan
Construction Permit N 4, 01.03.2018
This is given for the Reconstruction of water supply system
in Varagavan Community

The design documents are
1. developed by “Jrtaq” LTD

A. Abrahanyan
Sealed/Signed