INVOLUNTARY RESETTLEMENT DUE DILIGENCE REPORT
UPDATED VERSION

SUBPROJECT IV, KOTAYK MARZ, ARMENIA

WATER SUPPLY AND SANITATION SECTOR PROJECT- ADDITIONAL FINANCING

Project Number: L2860-ICB-1-03

YEREVAN

July 2015
ABBREVIATIONS

ADB  Asian Development Bank
PC  public consultation
GoA  Government of Armenia
RA  Republic of Armenia
AMD  Armenian Dram
LAR  Land Acquisition and Resettlement
LARP  Land Acquisition and Resettlement Plan
LARF  Land Acquisition and Resettlement Framework
WSS  Water Supply and Sanitation
WTP  Water Treatment Plant
AWSC  Armenian Water and Sewerage Company
SCWE  State Committee for Water Economy
LA  local authorities
DRR  daily regulating reservoir
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I. INTRODUCTION

A. Project Background

1. On the back of the successful implementation of the Water Supply and Sanitation Sector Project, Phase I, the Government of Armenia (GoA) through the State Committee for Water Economy (SCWE) has requested Asian Development Bank (ADB) to support the funding of the new project. ADB agreed to provide GoA with the loan of 40 mln USD to rehabilitate and extend of the water supply and sanitation (WSS) systems across 10 subprojects and improvements in operational efficiency and financial management of Armenia Water and Sewerage Company (AWSC). The additional financing project of the WSS Sector, Phase II includes 18 towns and 92 villages in order to implement the above-mentioned procedures. Within the scope of 10 Subprojects it is foreseen to make investments in 10 regions. This due diligence report concerns to Subproject IV in the absence of any land acquisition and consequently, no resettlement impacts.

B. Scope of the Project

2. The Project is aimed (a) to rehabilitate and upgrade water supply infrastructures, (b) to improve the performance of water supply services, and (c) to improve the management and operational efficiency of the water utility company.

3. As a result, Project will ensure further public health and environmental improvements by providing potable and reliable water supply to beneficiary households. It will also support poverty reduction by (i) reducing the incidence of waterborne diseases and costs of medical care; (ii) improving the time poverty of women due to labor intensive housework such as water collection, which may allow them to participate more in social and economic activities; (iii) providing safer and more reliable water supply; and (iv) improving the quality of life of households in all the project towns and villages by improving their access to safe and sustainable drinking water.

4. The Project will establish safe, reliable piped water supply for 112 communities: 18 towns and 94 villages within 10 Marzes (Aragatsotn, Ararat, Amavir, Gegharqunik, Tavush, Lori, Kotayq, Shirak, Syunik, and Vayotz-Dzor). The Project will be implemented through subprojects. The following villages and towns from Kotayq marz are the beneficiaries of the Subproject IV: Hrazdan, Tsaghkadzor, Abovyan and Charentsavan towns, Qaghsi, Akunq and Solak villages.

C. Design Features of Subproject IV

5. The network in beneficiary communities is mostly built in the 1960s-70s. In Hrazdan, Tsakhadzor, Abovyan and Charentsavan towns as well as Qaghsi, Akunq and Solak villages some waterlines and water metering units were built in the frame of the World Bank financed Municipal Water and Wastewater Project and Municipal Water and Wastewater Project -Additional financing projects. In Qaghsi village daily regulating reservoir was constructed in 2010-2011 in the frame of ADB WSSP.

6. The following elements are designed for Subproject IV: i) reconstruction and construction of polyethylene pipes, ii) replacement of the entry lines for the private houses, iii) installation of water metering units in reinforced concrete wells as well as construction and reconstruction of buried valve junctions in the following communities Hrazdan, Tsaghkadzor, Abovyan and Charentsavan towns, Qaghsi, Akunq and Solak villages. In Akunq community the exiting pumping station with

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1AWSC – a government-owned commercial company that is managed and operated through a management contract by an international water utility company.
installation of the new pumping aggregates will be repaired. In Tsaghkadzor a new 1000 m$^3$ DRR will be constructed.

The following measures are proposed by the detailed design for the improvement of water supply of the settlements. Details are presented below in the Table 1.

*Table 1: Works to be implemented*

<table>
<thead>
<tr>
<th>Works to be implemented</th>
<th>Unit</th>
<th>VI.1 Package</th>
<th>IV.2 Package</th>
<th>IV.3 Package</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconstruction of DRRs</td>
<td>km</td>
<td>3.227</td>
<td>0.905</td>
<td>1.250</td>
<td>5.382</td>
</tr>
<tr>
<td>Replacement of waterlines with de315 - de40 polyethylene pipes</td>
<td>km</td>
<td>23.774</td>
<td>9.940</td>
<td>12.552</td>
<td>46.366</td>
</tr>
<tr>
<td>Installation inlet lines of private houses with de32 – de20 polyethylene pipes</td>
<td>km</td>
<td>0.300</td>
<td>3.116</td>
<td>0.132</td>
<td>22.592</td>
</tr>
<tr>
<td>Installation of inlet lines of apartment buildings</td>
<td>km</td>
<td>6.6825</td>
<td>0.040</td>
<td>0.402</td>
<td>7.297</td>
</tr>
<tr>
<td>Construction of buried valve node</td>
<td>piece</td>
<td>-- 7</td>
<td>12</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Construction of water supply chambers</td>
<td>piece</td>
<td>-- 49</td>
<td>4</td>
<td>5</td>
<td>58</td>
</tr>
<tr>
<td>Construction of fire hydrant</td>
<td>piece</td>
<td>-- 5</td>
<td>2</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Replacement of water metering chambers</td>
<td>piece</td>
<td>631</td>
<td>295</td>
<td>30</td>
<td>1639</td>
</tr>
</tbody>
</table>

D. Objective and Scope of the Report

7. The objective of this due diligence report (DDR) is to review the Subproject IV land acquisition and resettlement (LAR) impacts based on the detailed design and propose mitigation measures, if necessary in accordance with ADB Safeguard Policy Statement (2009). This Report has been developed according to the project of Water Supply and Sanitation Sector - Additional financing Resettlement framework (2012).

II. LAND ACQUISITION AND RESETTLEMENT REQUIREMENTS FOR THE PROJECT

8. In terms of safeguard categories, the Project is defined as B category for involuntary resettlement impact (limited impacts). The preliminary design and later on the detailed design shows that the rehabilitation and construction will be conducted on property owned by the AWSC, on municipal/community land, or within the rights-of-way assigned to municipal/community infrastructure. So, there is no land acquisition and no LAR requirement.

9. Land Acquisition and Resettlement Framework (LARF) for AWSS Project (Phase II) has been prepared by the AWSC and was endorsed first by the SCWS under the RA Ministry of Territorial Administration
The document details mechanisms, procedures and compensation entitlements to be applied in the planning and implementation of Land Acquisition and Resettlement (LAR) activities.

III. MINIMIZING OF LAND ACQUISITION AND RESSETLEMENT IMPACTS

10. One of the main preconditions of the detailed design was the avoidance of the LAR impacts as LARF states that subprojects involving acquisition of private properties and/or cause significant involuntary resettlement impacts are ineligible for project financing and thus must be drop from the project.

11. Therefore, prior to each section detailed design, the cadastral maps for each community were examined to understand if there are any overlaps between the private or used lands and the existing water pipes. Verification of the cadastral maps was done also in the field based on the survey and measurement where applicable. After the exercise, impact on the legally/ illegally used lands/structures was avoided in the detailed design.

12. Main principals followed during the detailed design:

i. Pipes were located on sites that were already used for the same purpose and/or were owned by the community authorities;

ii. New lines were selected on the community streets, which helped to avoid the LAR as well as usage of the used lands by community members in the future. Also it will ensure easier maintenance of the infrastructure as well as prohibit illegal use of water from the pipes network.

iii. Where the private usage of the land was identified a new design solution was given to avoid the impact. Figure 1, 2 and 3 below have shown construction works of Hrazdan, Tsakhadzor and Abovyan communities.

All the designs were presented, reviewed, agreed and confirmed by Local Authorities (LAs). LAs also confirmed minor replacements of the water pipes. The design was also reviewed and confirmed by the owners of the public utilities such as Armentell CJSC, GazProm Armenia CJSC, Electric Networks of Armenia CJSC, etc.

i. In case of the reinstallation of the water pipes on the community lands, it is envisaged in the design, that the pavement of the road/land will be replaced with the same type of the pavement.
Figure 1. Hrazdan Community

Note:
Green lines: old pipes;
Red lines: new pipes,
Black lines: pipes taken out of operation

Figure 2. Tsaghkadzor Community

LEGEND
- EXISTING WATER LINE
- EXISTING DRR TO BE DISMANTLED
- NEWLY CONSTRUCTING DRR
- SANITARY ZONE FENCE OF DRR SERVICED BY AWSC
- EXISTING HIGH VOLTAGE LINE
Figure 3. Abovyan kentron district

Note:
Green lines: old pipes
Red lines: new pipes
Black lines: pipes taken out of operation
Blue lines: existing pipes

13. Project design was implemented in close cooperation with beneficiary communities.
   i. Public awareness about the project and the design was ensured by the Public Consultations (PC) with Local Authorities (LA) representatives and the members of beneficiary communities during detailed design stage (see Table 2).
   ii. All the designs were presented, discussed and agreed with LAs. In a result of an agreement all the designs were sealed by LAs.

Table 2. Public Awareness Campaign Implementation Status in Kotayk Subproject

<table>
<thead>
<tr>
<th>No.</th>
<th>Community</th>
<th>Date of meetings</th>
<th>Place of meeting</th>
<th>Approximate Time spent per meeting</th>
<th># of participants</th>
<th># of Female participants</th>
<th>% of Female participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>t.Charentsavan</td>
<td>23.12.2014</td>
<td>municipality</td>
<td>50 min</td>
<td>24</td>
<td>11</td>
<td>45.8</td>
</tr>
<tr>
<td>2</td>
<td>t.Abovyan</td>
<td>24.12.2014</td>
<td>municipality</td>
<td>30 min</td>
<td>12</td>
<td>7</td>
<td>58.3</td>
</tr>
<tr>
<td>3</td>
<td>v.Solak</td>
<td>23.12.2014</td>
<td>village hall</td>
<td>40 min</td>
<td>22</td>
<td>11</td>
<td>50.0</td>
</tr>
<tr>
<td>4</td>
<td>t.Hrazdan</td>
<td>25.07.2013</td>
<td>t.Hrazdan “Aarhus” center</td>
<td>1h 40 min</td>
<td>17</td>
<td>11</td>
<td>64.7</td>
</tr>
<tr>
<td>5</td>
<td>t.Qaghsi</td>
<td>25.07.2013</td>
<td>t.Qaghsi municipality</td>
<td>1h 20min</td>
<td>14</td>
<td>9</td>
<td>64.3</td>
</tr>
<tr>
<td>6</td>
<td>t.Tsaghkadzor</td>
<td>3.02.2014</td>
<td>AWSC “Tsaghkadzor” sector office</td>
<td>1h</td>
<td>21</td>
<td>14</td>
<td>66.7</td>
</tr>
<tr>
<td>7</td>
<td>v. Akunq</td>
<td>3.02.2014</td>
<td>v. Akunq village hall</td>
<td>1 h</td>
<td>18</td>
<td>2</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Total | 158       | 65                | 41.3

IV. SCOPE OF POTENTIAL LAND ACQUISITION AND RESSETLEMENT IMPACTS

14. The Subproject IV will not cause any permanent and/or temporary impacts, as the operation and maintenance activities will be mostly conducted on property owned by the AWSC, on municipal land, or within the rights-of-way assigned to municipal infrastructure.
15. Therefore, no impact is envisaged on privately owned land plots or community lands owned /used by community members. Construction of the water transmission pipeline will not cause any impact on the businesses as well. The roads and shoulders are wide enough so customers should not be impeded and there will be no loss of income. Additionally, constructors will provide temporary access during construction works.

16. No impacts on the water supply access to households and businesses is expected in the project areas during the reconstruction of the water supply pipes and reservoir. The following measures are foreseen to eliminate such impacts, despite these disturbances being rather short in duration:
   i. Informing all residents and traders about the nature and duration of work well in advance so that they can make necessary preparations;
   ii. Increasing the workforce and using appropriate equipment to complete the work in a minimum timeframe on these stretches; and
   iii. Ensuring that the connection to the new system is well coordinated before disconnecting households and business from the old system.

17. During implementation of construction works, temporary restriction of access or difficult pass ability situation may occur. The following provisions will be included in the construction Contractor’s contract for the purpose mitigation or neutralization of the impact due to the above-mentioned issues:
   i. Before the commencement of civil works, the construction Contractor will ensure the alternative solution for the access of community members to their land or place of residence;
   ii. In case of unavailability of alternative solution for the access, the Contractor will have to arrange/plan his works so that they do not affect local residents. Contractor also should inform all residents and traders about the nature and duration of work well in advance so that they can make necessary preparations;
   iii. To maintain customer access to the acting businesses, Contractor will provide wooden walkways/bridges and appropriate vehicle access across trenches at intervals.
   iv. In certain unforeseen cases when the land user loses his crop due to the restriction of access to the land the contractor has to report to the supervision consultant and stop the civil work activities in the affected areas until the crop are compensated as indicated in the LARF provisions.

18. Consultant's environmental and social impact specialist will monitor Construction impact in terms of relevance to the described procedures and approaches.

V. CONCLUSION

19. A final screening and due diligence for involuntary resettlement impacts for Subproject IV was implemented to ensure that the Subproject will not cause any LAR impacts. Both permanent and temporary impacts were considered and analysed during this process.

20. The Subproject IV includes upgrading and rehabilitation of existing physical facilities. The detailed design confirms that rehabilitation and construction will be done on property owned by the AWSC, on municipal land, or with the rights-of-way assigned to municipal infrastructure.
   i. The activities will not require permanent or temporary land acquisition irrespective of the ownership status and current usage of the land.
   ii. There are no any impact on businesses and/or any impact-generated activities.
   iii. No one will lose access to facilities, services, or natural resources.

21. During the construction phase AWSC will monitor the construction works in terms of any temporary/permanent impact, such as limitation of access to businesses or other livelihood resources etc. Any impact identified during construction works will be immediately reported to ADB and compensated based on the LARF provisions.