Tajikistan Climate Resilient Water Infrastructure Programme

Environmental and Social Appraisal and Action Plan
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Acronyms

AEI   Acute Enteric Infections
AESR  Annual Environmental and Social Report
AMA   Antimonopoly Agency under the Government of the Republic of Tajikistan
CDP   Corporate Development Programme
CEDAW Convention on the Elimination of all Forms of Discrimination Against Women
CO₂   Carbon Dioxide
CLO   Community Liaison Officer
EBRD or Bank European Bank for Reconstruction and Development
E&S   Environmental and Social
EHSS  Environment, Health, Safety and Security
ESAP  Environmental and Social Action Plan
ESDD  Environmental and Social Due Diligence
ESP   EBRD Environmental and Social Policy, 2008 edition
GCF   Green Climate Fund
GDP   Gross Domestic Product
HR    Human Resources
H&S   Health and Safety
ILO   International Labour Organization
IUCN  International Union for the Conservation of Nature
KMK   State Unitary Communal Enterprise Khojagii Manziliyu Komunali
NAS   National Agency of Statistics
NGO   Non-Governmental Organization
PIU   Project Implementation Unit
PIP   Priority Investment Programme
PMU   Project Management Unit
Programme Tajikistan Climate Resilient Water Infrastructure Programme
PR    Performance Requirements (as defined in ESP)
RWSCs Regional Water and Sanitation Companies, one of 6 to be established in Tajikistan as part of the water reform programme
SEP   Stakeholder Engagement Plan
SES   Sanitary Epidemiological Station
SMS   short message service
SPP   Stakeholder Participation Programme
TV    Television
UNECE United Nations Economic Commission for Europe
UNFCCC United Nations Framework Convention on Climate Change
UNICEF United Nations Children’s Fund
USDoS United States Department of State
WB    World Bank
WUCs  Water Users’ Committees
WWTP  Wastewater Treatment Plant
UES   Urban ecological services and departments

The present document was prepared for the Green Climate Fund (GCF) and is aimed at providing GCF and the public with relevant information regarding (i) the environmental and social assessment carried out by the European Bank for Reconstruction and Development (EBRD), and (ii) the resulting environmental and social action plan discussed with the Beneficiaries in the frame of the Tajikistan Climate Resilient Water Infrastructure Programme.
1 Background

1.1. Programme Description

The EBRD is considering providing financing for the priority investment programme “Tajikistan Climate Resilient Water Infrastructure Programme” (the “Programme”) in 20 urban communities in Tajikistan with the aim of improving the climate resilience of household water services in selected localities in Tajikistan by mainstreaming climate change risk analysis and climate resilience measures into the rehabilitation, management and governance of water infrastructure and services.

Water supply and sanitation systems in Tajikistan have been operating for more than 30 years. During this period, there has been largely no adequate technical maintenance and repair. As a result, water supply and waste water facilities have become decrepit and outdated. In addition, about 30% of these facilities were destroyed during the early 1990s as a result of internal armed conflicts. This fact added to the absence, malfunctioning or disruptions of water services delivery on a large scale. The existing situation features considerable problems in water availability, quality, accessibility, acceptability and to some extent also affordability. This hinders substantial part of the Tajik population to exercise a human right to access clean water. Therefore, considerable investment is needed to improve the current water supply and sanitation infrastructure and services. In order to address existing water supply and sanitation related issues, the Government of Tajikistan developed with relevant lenders a number of projects over the last several years. The EBRD has been active in financing investment activities and other services for the improvement of water supply and sanitation services in numerous cities of Tajikistan since 2004. The following projects are currently or have been subject to water and sewage investments financed by the EBRD loans:

- South Tajik Water Rehabilitation Project (2009 - 2013);
- North Tajik Water Rehabilitation Project (2010 – ongoing);
- Central Tajik Water Rehabilitation Project (2011 - ongoing);
- North Tajik Water Rehabilitation Project II (2012 - ongoing);

The intention of the EBRD is to (i) support further improvements in the water supply and sanitation services in 20 communities by rolling out the next phase of the investments and (ii) work together with Tajik authorities as well as the national, regional and municipal water companies to ensure that climate resilience is fully incorporated into household water services and adaptive capacities are developed in relevant institutions and stakeholders.

The main activities that will be included in the future investment plans are the following:

- Reconstruction of non-effective wells and construction of new wells;
- Reconstruction of the surface water intakes;
- Reconstruction of the water supply networks;
- Construction of pure water reservoirs;
- Procurement of water disinfection equipment;
- Construction and reconstruction of water pumping stations;
- Procurement and installation of flow meters;
- Reconstruction and extension of sewage networks;
- Reconstruction of sewage pumping stations;
- Maintenance and repair of electrical equipment;
- Purchase of new pumps;
- Reconstruction and construction of wastewater treatment plants ("WTTPs");
- Purchase of maintenance vehicles and equipment; and
- Other relevant.

The proposed investments of the new investment phase will in general have a strong positive impact on the environmental and health situation in the Programme area.

1.2. Programme Objectives

The Programme is expected to:
- Develop and finance affordable least cost and cost effective bankable investment sub-projects aimed at rehabilitation and development of water and wastewater infrastructure;
- Increase efficiency of the existing systems with strong social and environmental benefits;
- Address key cost restructuring elements (e.g. labour cost restructuring, energy cost savings, consideration of repair and maintenance costs in future budget calculation etc.); and
- Strengthen institutional capacity and governance amongst water companies and Tajik authorities for integrating climate resilience into water resource management and water service delivery.

The main benefits of the Programme are:
- Increased water production and reduction of non-revenue water;
- Increased water availability (flow and pressure) in the distribution system;
- Improvement of the water supply system reliability;
- Service area expansion;
- Control of water consumption by customers;
- Improved water quality;
- Secure wastewater equipment for population;
- Reducing leaks and direct discharge of non-treated waste water to the environment;
- Increased efficiency of the sewers;
- Improved quality of wastewater treatment;
- High operation and maintenance capabilities of water companies; and
- Ensure resilience of the infrastructure to changing climatic conditions.

1.3. Transition Impact

The Programme is expected to provide urgently needed water infrastructure to 20 communities in Tajikistan in combination with sector wide reform support to create operationally and financially sustainable water supply operations in the country.

Transition impact of the Programme and its sub-projects is expected to come from:
- Regionalisation of the water sector that will improve institutional sustainability, as well as enhance operational and financial sustainability in the sector.
- Establish a governance structure with the participation of local municipalities;
- Establishment of transparent contractual arrangement between the Regional Water Companies and the participating cities;
Elaborated tariff reform with regional adjustments;

Establishment of high corporate governance standards and introduction of a formal consultation process with water users in form of a community based stakeholder participation programme ("SPP"); and

Improved management of climate risks in order to improve climate resilience of infrastructure and household water services.

1.4. Client Information

The loan will be on-lent to Khojagii Manziliyu-Kommunali ("KMK"), the central governmental agency (State Unitary Enterprise) under the Government of the Republic of Tajikistan responsible for the delivery of basic municipal services such as water supply and wastewater services and to Regional Water and Sanitation Companies ("RWSCs") which will be responsible for supervising investment sub-projects. The local municipal water companies established as branches of individual RWSCs will be responsible for day-to-day implementation of the individual Programme’s components.
2 Detailed Programme Description

2.1. Rationale

Tajikistan is the most vulnerable country to climate change in the Europe and Central Asia region. Significant climate change, such as rising temperatures, consequent glacier retreat, and changes in average and extreme precipitation, have already been observed in Tajikistan, making it one of the most climate vulnerable countries in Central Asia, frequently experiencing extreme climate events that routinely take lives and destroy or degrade land, crops, and infrastructure.

In response, the main objective of this Programme is to improve the climate resilience of household water services in twenty communities in Tajikistan and to strengthen governance and necessary institutions to improve the climate resilience of household water services.

2.2. Current State of Infrastructure under the Programme

The state of current water and sanitation infrastructure and services, including in the Programme area, increases Tajikistan’s vulnerability to the climate change risks. As identified in the Third National Communication to the United Nations Framework Convention on Climate Change (“UNFCCC”), there is lack of modern, effective water distribution systems that reduce water losses, and few incentives for water-users to use available water resources efficiently. This is especially critical during summer months when water availability is projected to drop precipitously while demand peaks due to climate change. Furthermore, Tajikistan faces immense challenges in rebuilding and maintaining the basic infrastructure of its urban areas. These problems are exacerbated by the neglect and under-investment over the last twenty turbulent years since the collapse of the Soviet Union. Current water supply operations in Tajikistan can be characterised as follows:

- Severely deteriorated assets for water supply and wastewater collection;
- Limited wastewater treatment; wastewater collection and treatment systems are either absent or unable to service demands and fail to meet environmental guidelines;
- High operations and maintenance costs due to the deteriorated state of the assets;
- Unreliable water supply, sometimes a couple of hours every second day;
- Families are storing water in bathtubs and buckets when supply is available;
- Outbreaks of water borne disease, especially during the summer; and
- Low institutional capacity to manage operationally and financially sustainable water supply services.

The Programme represents a coherent and systemic response to these challenges.

2.3. Structure of the Programme and Objectives

The Programme is structured along 6 regional sub-projects:

- North Tajik Region (Chkalovsk, Gafurov, Isfara, Istravshan, Kanibaidam, Karaikkum, Shakhriston, Taboshar, Zafarobod);
- Mid North Tajik Region (Panzhakent);

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• Central Tajik Region (Gissar, Shachrinav, Somoniyon, Tursunzoda);
• South East Tajik Region (Dangara, Kulyob);
• South West Tajik Region (Kurgan-Tube, Rumi, Yovon);
• Gorno Badakhashan Region (Khorog).

The water and sanitation sector of Tajikistan will be institutionally restructured by establishing of up to six regional water and sanitation companies (RWSCs) with defined geographical remits and by reorganizing provision of the water and sanitation services in the municipalities under these new companies. The existing water and sanitation companies (Vodokanals) will be merged into the new RWSCs and will work in future as operational units (branches) of the respective RWSCs at the municipal level.

The Programme will focus on improving the efficiency and reliability of water use and supply, thereby reducing the vulnerability of drinking water supplies to climate change in up to 20 settlements in Tajikistan. The proceeds of the loan and the grant resources provided by the Green Climate Fund (“GCF”) and the EBRD under the Programme will finance: (i) measures to increase efficiency of water use to reduce climate vulnerability; (ii) measures to rehabilitate household water services infrastructure; and (iii) measures to establish alternative, climate-resilient sources of drinking water.

The envisaged Programme investment activities are described below:

• Increasing efficiency of water use to reduce climate vulnerability. This component would finance measures that would reduce demand resource requirement, but at the same time increase transparency of the usage and charging systems. These would include:
  (i) Installation of water meters in all participating settlements, in both domestic and commercial properties;
  (ii) Establishment and introduction of meter-based billing for all customers by RWSCs; and
  (iii) Establishment and introduction of management information and monitoring systems by RWSCs.

• Rehabilitation of household water services infrastructure. This component would finance a number of measures that would improve performance of the water services infrastructure in the participating settlements, in particular:
  (i) Introduction of water supply rehabilitation measures, incl. (re)construction of water mains from the water intake territories, renovation of pumping stations, construction of clean water reservoirs;
  (ii) Implementation of improvements to water storage to increase capacity and reduce water losses thereby improving the overall reliability of the water supply;
  (iii) Design and construction of wastewater recycling measures, including wastewater collection and treatment, and filters (effective treatment of wastewater will also reduce water pollution and drinking water contamination);
  (iv) Implementation of water loss reduction measures for distribution systems, including the introduction of leak detection equipment; and
  (v) Provision of mechanical and electrical equipment for repair and maintenance to improve operations of the rehabilitated water supply systems, including equipment.

• Identification and establishment of new, alternative climate-resilient sources of drinking water. This component would support the regional and local water companies in identifying new drinking water sources. Such identification frequently requires significant lead times yet early identification of such possible sources could provide water companies with options to reduced pressure on existing sources, especially in the north part of the country.
  (i) Identification of drinking water options for those participating settlements that are most likely to be adversely impacted by increasing water demand and climate change. Availability of water and its quality will also be determined. Also, recommendations for preferred options will
be made, based on consideration of environmental and social impacts, financial viability and sustainability.

(ii) Establishment of alternative drinking water sources in most vulnerable areas. This will help particularly vulnerable urban communities to increase the resilience of their water systems to climate changes impacts by diversifying water sources.

2.4. Expected Technical Benefits of the Programme and Sub-projects

The main benefits of the Programme and sub-projects are:

- Increased water production and reduction of non-revenue water;
- Increased water availability (flow and pressure) in the distribution system;
- Improvement of the water supply system reliability;
- Service area expansion;
- Control of water consumption by customers;
- Improved water quality;
- Secure wastewater equipment for population;
- Reducing leaks and direct discharge of non-treated waste water to the environment;
- Increased efficiency of the sewers;
- Improved quality of wastewater treatment;
- High operations and maintenance capabilities of participating water and sanitation companies (Vodokanals).
3 Initial Screening of the Programme and Scoping of the Assessment

The Programme and all sub-projects were categorised “B” by EBRD under the 2008 Environmental and Social Policy (“ESP”). An Environmental and Social Due Diligence (“ESDD”) of the water companies’ current EHSS management practices, operations and facilities, and an Environmental and Social Assessment of the proposed Priority Investment Programme (“PIP”) were carried out as part of the Feasibility Study by independent consultants.

E&S assessment & audit review. Overview of environmental and social findings included Environmental and Social Management, Labour & Working Conditions, Pollution Prevention & Abatement, Community Health, Safety & Security, Biodiversity Conservation & Sustainable Management of Living Natural Resources, Cultural Heritage, Information Disclosure & Stakeholder Engagement, Population and Diseases. The due diligence investigations showed that the participating water companies have weak EHSS management capabilities and underdeveloped Environment, Health, Safety and Security (“EHSS”) management systems, and that their current occupational health and safety and stakeholder engagement practices require further improvement to meet EBRD’s Performance Requirements (“PRs”). Companies’ facilities are currently in poor operating condition resulting in unreliable and low quality water supply, high water losses and energy consumption. Wastewater collection networks are incomplete and wastewater treatment is almost absent.

Impacts of investment phase. The description of the potential impacts of the proposed investments under the Programme, in particular on society, environment and natural resources were identified. The due diligence concluded that the implementation of the proposed PIP is expected to significantly improve efficiency, reliability and quality of water supply and wastewater collection for all localities, thus contributing to the provision of uninterrupted access to safe drinking water, prevention of ground and watercourses pollution and improvement of public health.

Other initiatives. Besides the Programme itself, a number of other efforts have been exerted by different donors to support of the rehabilitation of urban water supply and sewage facilities in Tajikistan. Apart from feasibility studies, there have also been initiatives by both the World Bank and EBRD to identify problems in the managerial and operational fields and develop methods and programmes for the implementation of relevant improvement measures.

Preparation of Environmental and Social Action Plans. The Environmental and Social (“E&S”) due diligence consultant provided detailed questionnaires and distributed them to all participating existing water and sanitation companies (Vodokanals) in 20 participating cities. During both missions, workshops were carried out in order to evaluate the implementation of the Environmental and Social Action Plans (“ESAPs”) and Stakeholder Action Plans (“SEPs”). Based on previous environmental and social due diligence and the existing ESAPs for each participating city prepared updated ESAPs for each RWSC taking into account the achievements under existing sub-projects.

Climate change appraisal. Climate change is assumed to have fundamental effects on the area of Tajikistan and the living conditions in the regions in the long term. Assessment of projected climate change impacts on water resources in this region (conducted as part of the Feasibility Study for the project) indicate that both surface water and shallow groundwater resources are highly likely to be negatively affected. In order to mitigate this risk and improve climate resilient strategy for public water supply, the project activities have been prioritised to maximise the co-benefits in terms of climate
resilience and operational effectiveness and efficiency. In particular, water supply efficiency improvements and leakage minimisation will provide a buffer against supply shortfalls during periodic drought or as the result of a progressive decline in water availability due to climate change.

**Gender appraisal.** Significant gender gaps in access to employment and access to services were identified as part of the assessment. A high proportion of the population lacks access to clean and reliable water supply, which places a particular burden on women and children, who are generally responsible for water collection. The proposed Programme is expected to significantly contribute to the provision of uninterrupted access to safe drinking water, prevention of ground and watercourses pollution and improvement of public health, which will significantly benefit women. Moreover, noting that women’s labour force participation (59%) is lower than men’s (77%), women’s average earnings are (41%) lower than men’s and, overall, women are rarely represented in management positions, the proposed Programme will seek to promote equal opportunities in the companies’ workforce and operations.
4 Examination of Alternatives

The ‘zero’ alternative considers the situation when the Programme does not materialize but the demand for water and wastewater services continues as forecast. In the case the Programme is not implemented, it is likely that the currently substantially deteriorated network will continue to be used for water supply and wastewater collection and disposal. However, availability, quality, accessibility and, acceptability of water and sanitation services would be degraded, wastewater discharges will fail to comply with national standards and in particular contamination of soils and groundwater with associated general health risk exposure will further develop. Other subsequent development alternatives have been considered under the LTIPs.
5 Environmental and Social Baseline

5.1. Introduction

This chapter provides a short introduction of overall findings of the Environmental and Social Due Diligence. As with the other aspects presented in this appraisal report, there are only slight differences between the fundamental conditions found in each city or town included in the Programme. Therefore, a number of general observations concerning the existing conditions can be made based via consideration of the Performance Requirements (PRs) set out in the EBRD ESP.

5.2. Regulatory Framework

The regulatory framework applicable to the Programme includes in particular Tajik sanitary and technical requirements for water supply and sanitation, environmental, health and safety, social and labour legal requirements. In addition, the ERBD standards, including the EBRD ESP and PRs, basic EU environmental and social directives and best practice are to be applied.

5.3. Environmental and Social Management

The major gaps of the existing participating water and wastewater operators included into the Programme are:

- Environmental policies and management systems are absent;
- There are no transparent procedures concerning staff recruitment and retention as well as existing organisational and personnel development;
- Health and Safety (“H&S”) policies are absent or out of date;
- Fire and emergency procedures as well as corresponded equipment are absent or out of date;
- Environmental, health and safety procedures and efforts are, in many respects, not formalised, but run according to ‘best efforts’.

Responsibility for environmental management is not specifically assigned to any staff member. In practical terms, environmental management practices are weak, partly as a result of the policy vacuum, but also due to the low levels of resources (financial and technical).

Overall, poor compliance with the managerial aspect of the PRs is apparent. Moreover, there are serious difficulties experienced by the individual companies in implementing measures with respect to for environmental, health and safety management.

5.4. Labour & Working Conditions

Workers are generally not well informed about their statutory and contractual rights. The water companies do not obstruct a right of workers to get organized (labour associations exists on a local level), but there are only partial systematic internal grievance mechanisms within the water companies’ procedures. Neither do the water companies understand how the full recognition of workers’ rights can improve their overall performance, such as increased motivation, improved use of capacities and staff retainment.

Some water companies have difficulties to find qualified personnel due to low salaries and unattractive working conditions. The salaries do not refer to education, qualification and previous
working experience. However, only few women are recruited to management and in general no non-Tajiks are recruited to management positions, with only a few exceptions.

5.5. Pollution Prevention & Abatement

Pollution prevention relates predominantly to wastewater management. Only very limited quality of wastewater treatment is possible under the current low availability of wastewater infrastructure. Consequently, in most of the cases wastewater is discharged untreated, leading to pollution of the environment and associated health risks.

The existing wastewater collection and treatment systems in the cities covered by the Programme cities constructed during the Soviet period. In all cases, the existing collection systems did not achieve full service coverage of the relevant urban territory. In the post-Soviet period, the systems have not been adequately maintained and much of the infrastructure is grossly deteriorated and out of operation.

In most of the Programme cities, wastewater collection coverage is significantly below 75% (highest in Kairrakum ~ 75%; lowest in Shakhrinav ~ 0%).

Properties that are not connected to the centralised collection system use a variety of means to manage wastewater, including septic tanks (with drain fields), cesspits, direct discharge to nearby watercourse, drainage channels and latrines. These systems are not monitored and the fate of pollutants and sludge is not known; it is likely that significant diffuse pollution of shallow groundwater and small watercourses is arising as a result of these practices. The situation is exacerbated by leakage from the decaying centralised wastewater collection system.

In most cities, wastewater treatment facilities were built during the Soviet era and are either out of operation or not working sufficiently. Often, wastewater just overflows the former mechanical treatment stage, bypasses aeration tanks and is treated at basic biological ponds located at the WWTP site.

The treatment method is not complying with either national regulations or EU standards. Following insufficient treatment the wastewater is discharged directly into rivers, or it is evaporating and infiltrating the ground. In some localities, the whole WWTP is out of operation and wastewater is discharged directly to nearby irrigation ditches or rivers. As a result, surface water bodies and the surrounding environment is heavily polluted by the locally discharged wastewater. It is possible that in a number of cases in some localities, local landowners are diverting wastewater flow away of the irrigation ditches or rivers onto their croplands for irrigation and fertilisation. Whilst this may represent a good use of limited resources, it presents serious health concerns arising from the risk of water-borne infections.

Especially the situation in the northern region is of concern. Some cities are discharging their wastewater without or only with poor treatment into the recipient rivers and lakes. The cities further downstream are abstracting water of the river for their water supply systems and irrigation purposes. This situation increases considerable the risk of water-borne diseases.

In 2005, cholera cases occurred which could have been caused by the highly bacteriological contaminated water due to absence of appropriate wastewater treatment.

The sanitary authorities of the cities regularly test water quality discharged into the recipients (rivers, irrigation channels, etc.). Due to insufficient wastewater treatment, the water quality does not achieve the Tajik statutory and regulatory limits. Therefore, the water companies get fined by the authorities. As most of the water companies are already in poor financial condition, these fines make it even more difficult for them to take relevant investment actions to meet relevant Tajik environmental standards.
5.6. Community Health, Safety & Security

As with labour health and safety, the water companies operate on the basis of ‘best endeavours’, but generally do not have a systematic approach or the means to adequately protect community health to a level which would be considered compliant with this PRs. Laboratory testing of water quality is particularly absent in some cases, largely due to a lack of relevant laboratory equipment. Although chemical and bacteriological tests are carried out by sanitary epidemiological centres, these vary in terms of frequency. In addition, some tests do not meet Tajik national standards. The level of in-house water quality testing is generally inadequate in terms of parametric coverage, frequency of sampling and quality control. The water companies are mostly reliant on the monitoring undertaken by the local sanitary inspection agencies.

5.7. Biodiversity & Sustainable Management of Living Natural Resources

Only sustainable resource management is considered in this Report, since the issue of biodiversity conservation relates to resource management. No protected habitats or species are to be influenced by the realisation of investments under the Programme.

In the water supply systems of all the localities covered by the Programme, there are high amounts of water losses and unaccounted-for water. This is due to network and pipe leakage as well as consumer wastage. Leaving aside the poor state of the infrastructure, the water companies experience considerable difficulties in the ‘management’ of resources because they simply do not have relevant information nor they collect it on a continual and consistent basis. Although installation of water meters started in some cities, further investments will be needed to assure proper information on the situation regarding water losses in the systems in order to reduce water wastage by population; population with water meters will have to pay for each m³ of water which has a potential to decrease the omnipresent wastage.

5.8. Cultural Heritage

In some cities (e.g. Gissar and Shakhrinav) historical sites with findings dating back 3,000 years ago exist. The general recommendation for the Programme implementation is to increase basic knowledge as appreciation about historical heritage and handling of artefacts during repair work and new construction in all water companies.

As far is the water companies are concerned, there are no properly defined chance finding procedures. However, they have established a standard approach for chance findings according to Tajik laws and regulations. The detected artefact is usually handed over to the Ministry of Culture and a finder gets a reward. It is expected, that the artefacts are salvaged improperly and handled without the right care before they get to the ministry.

5.9. Information Disclosure & Stakeholder Engagement

Information disclosure and stakeholder engagement practices vary slightly between the water companies (mostly in frequency of meetings). In most instances, there are mechanisms in place by which regular communication with consumers can be achieved.

External grievance mechanisms are, in most water companies, very basic. Moreover, customers are able to make complaints directly at the water companies’ headquarters and in most cases there are no defined procedures how to handle customer grievances. Therefore, these procedures are currently done on a ‘best effort’ approach which is fairly undeveloped and non-systemic.

According to the information received from the water companies, stakeholders have been informed about construction works of previous water projects in Tajikistan via TV, radio or newspaper. There
have only been very few complaints, mostly during the construction works. It is mainly due to the fact that the population prioritise in their sentiments that water supply and wastewater systems are rehabilitated and developed.

Overall, there is a limited understanding of how to relate to stakeholder (in particular customers) or share information with them (e.g. on health and waterborne diseases, responsibilities related to in house repairs, tariff setting, general awareness on environmental and social issues or any other issues that could/should be communicated) in order to improve customer relations, decrease complaints and increase willingness to pay both in the short and long run. The need to address customer relations is essential for the sustainability of the water companies and should be addressed in an appropriate manner immediately and continuously during the Programme implementation.

As with other operational issues, the stakeholder engagement approach currently adopted is not systematic and rigorous enough than accepted good international practice commands.

5.10. Population and Diseases

Regarding general demographic data for all the 20 cities under the Programme, an increase in population is on the rise in all the cities. The number of births exceeds the number of deaths. Therefore, the positive value of population’s increase can be asserted. Consequently, the measures undertaken to raise water quality will have an impact on the higher number of people.

The level of infectious water-borne diseases can serve as a probabilistic criterion for public companies and the need for resettlement sanitary measures. Analysing the data of diseases throughout all the participating cities in the Programme, it should be noted that the level of infectious diseases among the children’s population is between 70 to 80% of the total and in Gafurov the quota of AEI-infected children is under 50 percent.

Typhus is decreasing, but infectious diseases, especially AEI and hepatitis A, remain at a high level in all the cities. It is assumed that this is due to the unfavourable sanitary and epidemiological situation in the areas concerned. It was not possible to analyse the gender bias of diseases in all the cities due to a lack of gender disaggregated data.

5.11. Gender Context

5.11.1. General Overview

Tajikistan has a supportive gender equality legal framework. Nevertheless, women face practical barriers to greater participation in business, employment and public life. An upsurge in traditional gender norms that locate women’s primary responsibilities in the home (family/household duties) and men’s in the public sphere (employment, business, political representation) has been observed.

Poverty in the society has led to high levels of immigration (mostly men migrating to Russia) to such an extent that Tajikistan is now the most remittance-dependent country in the world, with remittances accounting for 52% of GDP (WB, 2014c). While remittances provide a critical safety net for many poor households, women do not always gain control over household finances or a stronger voice in community groups despite increased responsibilities in their husband’s absence (e.g. land management). There are growing concerns about the vulnerability of “abandoned wives”, i.e. those whose husbands who do not remit money or divorce their wives while abroad.

Around 70% of the population lives in rural areas, where women experience more restricted access to transport, education and health services.

The table below describes key indicators for participation of women and man in the economy of Tajikistan.
Table 1: Women and men in the economy, %

<table>
<thead>
<tr>
<th>Key indicators</th>
<th>Female</th>
<th>Male</th>
<th>Female &amp; Male</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Labour market</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour force participation² (% of the active employed population that are women/men) (WB, 2014)</td>
<td>59</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Self-employment (% of female, male and combined employed population who are self-employed) ILO KILM, 2009</td>
<td>41.5</td>
<td>52.6</td>
<td>47.8</td>
</tr>
<tr>
<td>Unemployment rate (15+ years) (% of female, male and combined population aged 15+ years who are unemployed) ILO KILM, 2009</td>
<td>9.9</td>
<td>11.6</td>
<td>11.5</td>
</tr>
<tr>
<td>Youth unemployment rate (15-24 years) (% of female, male and combined population aged 15-24 years who are unemployed) ILO KILM, 2009</td>
<td>13.7</td>
<td>19.8</td>
<td>21.0</td>
</tr>
<tr>
<td>Public sector employment (% share of public sector employment) NAS, 2012a</td>
<td>33.5</td>
<td>66.5</td>
<td></td>
</tr>
<tr>
<td>Child labour (% of child labourers that are girls &amp; boys – i.e. those aged 5-17 working in contravention of ILO C138 or 182) UNICEF 2002-2012 figures</td>
<td>10.6</td>
<td>9.4</td>
<td>10</td>
</tr>
<tr>
<td>Gender pay gap (women’s average monthly earnings expressed as a % of men’s average monthly earnings) NAS, 2012a</td>
<td>58.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Business</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firms with female participation in ownership (% of all firms) WB Enterprise Survey 2009</td>
<td>34.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank account at formal financial institution (% female and male population aged 15+) World Bank Financial Inclusion Database, 2014</td>
<td>9.1</td>
<td>13.9</td>
<td></td>
</tr>
<tr>
<td>Loans in the past year from a financial institution (% female and male population aged 15+) World Bank Financial Inclusion Database, 2011</td>
<td>3.2</td>
<td>6.4</td>
<td>4.8</td>
</tr>
<tr>
<td>Micro-credit (% women and men who have received microcredit), NAS, 2012a</td>
<td>34.8</td>
<td>65.2</td>
<td>[100]</td>
</tr>
<tr>
<td><strong>Government</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Representation in national parliaments (% of seats in the parliament held by women) NAS, 2012a; UNECE, 2013</td>
<td>19</td>
<td>81</td>
<td>[100]</td>
</tr>
</tbody>
</table>

Source: EBRD. Tajikistan: Country Gender Brief. April 2016

5.11.2. Division of Labour

5.11.2.1. Access to Finance

Some 34% of businesses have one or more female owners (in line with the regional average of 33%). However, women’s businesses tend to be small, low-value and informal enterprises on the whole, such as small-scale market trading. Also, many rely on remittances for supplementary income.

Women face particularly difficulties in access to credit, including lack of collateral due to low levels of land ownership and perceptions that women are less creditworthy than men. Consequently, women are half as likely as men to obtain loans from formal financial institutions (3.2% of women versus 6.4% of men).

5.11.2.2. Access to Employment

Women’s labour force participation (59%) is lower than men’s (77%). There is strong gender segregation in the labour market, with women concentrated in lower-wage sectors (agriculture, health care, education and hotels and tourism). Women’s average earnings are 41% lower than men’s.

Women’s employment levels were negatively affected during the post-Soviet when jobs were scaled back in the public sector and social services (including childcare) dismantled. The 2008/9 financial crisis resulted in over 40% of women moving out of waged employment (versus 30% of men) and stimulated an increase in women’s share of external labour migration (6.6% in 2007 to 15% in 2012).

² Labour force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labour for the production of goods and services during a specified period.
5.11.3. Control over Resources

5.11.3.1. Access to Services

Childcare: Women are overwhelmingly responsible for childcare and have been disproportionately affected by the decline in state-run childcare facilities.

Water, waste, transport: A high proportion of the population lacks access to a clean reliable water supply, which places a particular burden on women and children, who are generally responsible for water collection.

5.11.4. Decision-Making

5.11.4.1. Women’s Position within Home / Family / Community / Society

Status in family. According to CEDAW (2013), deep-rooted gender stereotypes result in many women having a disadvantaged and unequal status in the family. Men are traditionally seen as the heads of household and primary breadwinners. In addition, it is traditional for young families to live with the husband’s parents and sometimes their extended family, particularly in rural areas. There has been an increase in ‘abandoned wives’, since many economic migrants fail to send remittances or to return home (USDoS, 2014), leaving families without a main breadwinner and extremely vulnerable to poverty.

Inheritance. Although there is no overt discrimination in law with regard to inheritance in Tajikistan, inheritance is usually passed in practice on to sons (USDoS, 2014) and property acquired by women is usually registered in the name of male relatives (CEDAW, 2013).

Divorce. Men and women have equal rights to begin divorce proceedings, except that the husband does not have a right, without the consent of the wife, to file for divorce while the wife is pregnant or for a year and a half after the birth of a child. But divorce is stigmatised: many men are reluctant to marry a divorced woman.
6 Environmental and Social Assessment and Mitigation Measures

6.1. General Information

This chapter includes a description of the impacts of the Programme and further recommendations to achieve desirable progress on its environmental and social aspects as well as potential mitigation measures to attain this goal both on the local and regional level.

The following sections contain key measures to avoid or mitigate/minimise any impacts of the Programme on the environment and the society during construction and operational phases. More details on all mitigation measures are contained in the ESAPs and SEPs for each individual sub-project.

These recommendations and mitigation measures are general and therefore apply for all the participating cities in the Programme. It is worth noting that not all possible negative impacts can be eliminated within the available investment envelope constraints in the course of construction works. Therefore, every sub-project possesses some risk of negative E&S impacts, but these impacts can be considered as low when compared to the substantial benefits to be realized by their implementation.

6.2. Impact on Labour and Working Conditions

All water and sanitation services pose a certain risk to the health and safety of workers. In water supply facilities manual handling of chlorine has a severe impact on labour and working conditions during operation.

During the construction period (for water supply and wastewater facilities), additional risks (e.g. risk of accidents etc.) could occur which have to be addressed by adequate mitigation measures. Measures to reduce negative occupational health and safety impacts which occur during the construction and operational period concern:

- Accidents and injuries;
- Chemical exposure; and
- Exposure to pathogens;

From the social perspective, the Programme can potentially lead to:

- New staff being hired; and
- Increased salaries over time (as a result of improved payments from customers).

Mitigation:

An Environmental Health and Safety Plan will be developed for the RWSCs to enable them good performance during construction and operation. Safe operation of all companies, vehicles and equipment will be ensured through safety trainings, personal protective equipment, medical checks etc.

Fire and safety rules will be adopted. Maximum working hours are to be restricted.

Personal protective equipment will be used during construction, operation and maintenance activities.
Public and occupational H&S risks during construction should be reduced by the implementation of a Construction H&S Plan, including a road traffic management plan, which will be part of the contract with the construction company.

Manual handling of chlorine will not take place in the future. Automatic chlorine dosing equipment will be installed.

A monitoring system will be installed in order to measure compliance with objectives on a regular basis.

6.3. Impact on Workers’ Rights

A complete Programme implementation will largely have positive side effects to workers’ condition if and only if active measures are taken. From the social perspective the Programme can potentially lead to:

- New staff being hired;
- Increased salaries over time (as a result of improved payments from customers).

Mitigation:

Clear procedures related to recruitment both external and internal should be developed on a medium/long term basis. The priority is to revise the whole staffing situation first and find feasible solutions.

The procedures should include aspects such as (not exhaustive) job descriptions, how to develop selection criteria with a gender perspective (e.g. avoid traditional female/male positions if possible, see gender equality and diversity as an asset in all levels and positions), interview procedures, the use of external assistance in selection committees for recruitment to management positions and gender aware recruitment, and development of contracts and procedures for termination of contracts. An in-depth revision of who is recruited for what positions and salary correction is done in order for the investment to be equally beneficial for male and female staff is envisaged.

Furthermore, the water companies are to revise their recruitment policies into management positions, as well as to increase understanding of gender equal policies as a business advantage through training.

The development of a non-discrimination and gender policy, including practical on the ground improvements, will also be required at the water utility level. This action should be taken as a medium/long term investment on the basis of which issues related to e.g. salary, recruitment, harassment, staff capacity development and future vision of the organizational structure can be developed.

The implications of double work and sometimes double salaries has not been explored in-depth, but should be considered in the general salary and salary scale revision. It is therefore recommended that any future salary and salary scale revision take this aspect of additional salaries into account.

In addition, the build-up of an internal workers’ grievance mechanism is recommended and long term work with management culture to embrace the possibilities to improve management lying within such mechanism. The grievance mechanism should be able also to tackle situations such as harassment of sexual or other character based upon e.g. gender, age, ethnicity, religious beliefs or any other factor).

Even though ethnicity is a subject rarely spoken about the general situation in Tajikistan and in surrounding countries (e.g. Kyrgyzstan and Uzbekistan) could be taken into account locally, by ensuring that anti-discrimination policies are developed at the workplace. The policy should e.g. entail
that ethnicity is taken into account in the same areas as gender (salary scale, salaries, traditional roles and recruitment to management positions).

6.4. Impact from Noise and Vibration

During construction works, noise generation will be inevitable. The construction works for pipe laying will however not last very long. Most of the water intake and waste water treatment areas are in appropriate distance to settlements however impacts regarding noise and vibration will arise through frequent traffic during construction works. During rehabilitation and construction works of water supply and sewage systems the construction works will take place directly in the settlements, what impacts the neighbouring citizens especially by noise, vibrations and dust.

During the operational phase traffic will cause noise and vibration but will not be higher in comparison to the current situation.

Mitigation:

During the construction phase it is necessary, that the traffic is kept as low as possible. Speed limits for trucks will reduce the generation of noise and vibrations. Fixed routs should be found, which are, if possible, outside areas of high population density.

6.5. Impacts on Soil, Groundwater and Surface Water

Through investments in the rehabilitation of the water abstraction facilities and pipe networks the efficiency will be increased and water losses decreased. Through safe wastewater collection and treatment soil, groundwater and surface water will not be polluted in the long-term.

During construction works no large amounts of chemicals or other dangerous substances will be used, except for normal fuels and oils needed to operate the construction vehicles.

The contamination of soil and groundwater (if relevant) due to spills or leaks of fuel and oils should be avoided through the application of safety measures like refuelling in respective areas and application of technical standards. Contaminated soil should be stockpiled away from sensitive areas (drainage channel, water supply).

During the operational period especially filters of the water and wastewater treatment plants have to be attended. If a flushing of the filters is necessary the procedure has to be done in a way that the sludge and sediments can be collected and treated in a proper way. An uncontrolled discharge of probably contaminated sludge could harm soil, groundwater and surface water.

Soil and slope stability will be enabled through careful design and construction works. Training will be provided for the construction works and the later operational phase and will be routinely inspected.

Mitigation:

Improvement of water supply and sewage collection and treatment. Use of water saving technology. Awareness rising of population regarding the sustainable use of water resources.

Good construction and safety practices will be adopted to avoid spills and leakages of fuels and oils e.g. refuelling in designated areas with spill protection during construction and operation.

Use of chemicals and dangerous substances will be avoided. Stockpiling of soil away from sensitive areas will be implemented. Training will be provided.

Development of a proper filter flushing procedure and a treatment procedure for sludge and sediments.
A monitoring system will be installed in order to measure compliance with objectives on a regular basis.

6.6. Impacts on the Air Quality through Emissions

Transport
An impact of transport to the air quality due to increased frequency of transport during the construction phase is expected. Temporarily a higher number of vehicles might cause increased traffic and CO₂ emissions. The transport will be carried out at local roads.

Anyway, compared to the total air emissions in the cities covered by the Programme the construction site traffic will only lead to a marginal, temporary and regional increase of air emissions.

Use of Energy and Water Saving Equipment
Higher CO₂ emissions will be expected during the time of construction; however, they will be compensated through upgraded future water supplies and waste water treatment systems. The water saving technology should be used in the future as well as installation of more energy efficient pumps makes CO₂ emission reduction possible in the operational phase. Additionally, it is advisable to consider renewable energy as energy source for pumps and other equipment in use.

Dust
During construction and operation, dust from the working areas and truck traffic may cause air impact.

Mitigation:
During construction temporarily increased traffic and resulting CO₂ emissions will occur. Truck traffic should be kept as low as possible. Trucks should only drive fully loaded and avoid driving more than the really necessary kilometres. Speed limits will reduce the air emissions. Use of covered trucks, watering of roads and work areas when dust emission during construction and operation is high. Speed limits for unpaved roads will be given.

Emissions should be controlled on a regular basis. In case of exceeding critical values, actions have to been taken to reduce or stop emissions.

A monitoring system will be installed in order to measure compliance with objectives (driven kilometres, usage of emission control devices - e.g. catalytic convertors) on a regular basis.

6.7. Impact from Waste
During the construction works the generation of solid wastes cannot be avoided, e.g. redundant pumping equipment and broken sections of pipe.

Construction waste (only non-hazardous) will be stored separately and will be disposed in designated landfills or recycled/reused.

Hazardous waste that will be used during construction or operation (e.g. chemicals, batteries) and has to be stored separately and have to be disposed or treated in designated facilities. Also, asbestos from old pipes needs to be disposed in the designated areas.

Wind-blown litter may occur during both the construction phase as well as the operational phase.
Mitigation:

Provision of designated areas for construction waste. Storage for hazardous waste and emergency clean up equipment will be provided. Disposal of hazardous wastes according legal requirements will be carried out.

6.8. Impact from Wastewater

Currently pit latrines which are not sealed in many house backyards pollute the groundwater and also pose a risk for private shallow wells and a great risk for human health. Due to the partial high groundwater levels in some cities covered by the Programme, this becomes particularly true.

Through improvement and extension of the sewer system and construction of a new waste water treatment measures the impacts on soil, groundwater, surface water and air will be reduced. It is important that the existing sewerage systems is rehabilitated and extended, to reduce seepage at the pipes and reduce amount of pit latrines in the cities.

Due to the improvement of the waste water treatment facilities pollution of soil, ground water, etc. can be minimized. A proper sludge treatment has to be designed also, to reduce negative impacts to the environment.

Waste water treatment facilities bear the risk of fire and explosion due to the fact that sludge gas development is possible. In case of non-ventilated manholes and other waste water related buildings this can be very dangerous during maintenance works and confined space entry procedures have to be developed and implemented.

Mitigation:

Improvement and extension of sewer system and construction of new waste water treatment facilities.

Groundwater and surface water quality control procedures and emergency preparations are implemented.

Development and Introduction of health and safety procedures as part of the Environmental Health and Safety Plan for Works in waste water facilities.

Negative impacts arising from insufficient management of facilities will be minimised or eliminated through proper maintenance and operation of all facilities. Additionally, routine repair and maintenance works will be carried out and lacks and needs for improvement will be identified regularly.

Public awareness campaigns and health and safety training for workers will in addition improve the wastewater treatment and will maximize the benefits from the Programme and individual sub-projects.

A monitoring system will be installed in order to measure compliance with objectives on a regular basis.

6.9. Impact from Availability of Water, Sanitation and Waste Water Facilities

Some water supply, sanitation facilities, waste water collection and treatment facilities are currently not according international standards and pose a risk to the environment as well as the public and workers health.

Due to the implementation of the Programme and the installation of step-by-step improvements in the water supply and in the waste water collection and disposal system as well as further sanitation measures, the environment as well as the public will benefit extensively.
Mitigation:

Negative impacts arising from insufficient management of facilities will be minimised or eliminated through proper maintenance and operation of all facilities. Additionally, routine repair and maintenance works will be carried out and lacks and needs for improvement will be identified regularly.

Public awareness campaigns and health and safety training for workers will in addition improve the waste water treatment and will maximize the benefits from the Programme. Grievance mechanisms and procedures will be introduced.

A monitoring system will be installed in order to measure compliance with objectives on a regular basis.

6.10. Impact on Community Health, Safety and Security

In general, it must be presumed that any improvement that will lead to a more efficient water supply, waste water treatment and disposal system will also lead to an improvement in the health situation in the cities covered by the Programme. Especially children will be directly positively affected by the investments, as children in general are more susceptible to infections.

The main public health and safety dangers during construction are road traffic and risk of accidents.

Community health and safety hazards during construction and operation include contact with waste water and waste above all hazardous waste, exposure to pathogens and vectors and risks of accidents during construction and operation. Accidents can occur e.g. during excavation of trenches, pipe laying and filling of trenches as well as handling with hazardous materials e.g. asbestos cement pipes as well as maintenance works in waste water facilities with possible sludge gas building potential and resulting risk of fire and explosions. Additionally, noise and vibration impacts during construction works are possible.

Mitigation:

An Environmental Health and Safety Plan will be developed for the companies to enable construction works and operation without unauthorized access of the population to the construction sites and facilities.

Safe operation of all companies’ vehicles and equipment will be ensured through safety trainings, personal protective equipment, medical checks etc. Fire and safety rules will be adopted. Maximum working hours are restricted.

Water supply and waste water facilities will be fenced and unauthorized access will be prohibited.

Public H&S risks during construction will be reduced by the implementation of a Construction H&S Plan, including a road traffic management plan, which will be part of the contract with the construction company.

The Programme has potential positive impact on improved water quality and decrease of water-borne diseases, especially in children.

The investments into technical solutions will, however, not automatically lead to improved health (in relation to the water). The following overall actions are recommended to ensure improved community health and safety:

- Increase sampling and include all parameters in the testing of the water;
- Disaggregate statistics according to sex;
• To conduct full investigations of all categories of diseases in order to have a complete picture of the health related impact of contaminated drinking water;
• To conduct studies on the bacterial micro flora of sewage water to know more exactly the extent of drinking water contamination and to improve safety to the public health;
• To educate staff at the water utility about waterborne diseases and the responsibility of the water utility in this regard;
• To include seminars and information outreach for staff at especially hospitals and schools, parents and children on basic skills in personal hygiene to avoid that infants and children become seriously ill (within the investment sub-project);
• To include health information as separate issues in the SEP; who should be informed about what, when and why;
• To build-up of an efficient external grievance mechanism to handle complaints, billing, information to customers (e.g. on tariff setting, construction works, responsibilities for in-house repairs);
• To build-up an information system to inform the community as fast as possible, when water quality does not meet requirements.

6.11. Land Acquisition, Involuntary Resettlement and Economic Displacement

During the implementation phase, no involuntary resettlement will take place in the cities covered by the Programme. All water supply facilities will be renovated, reconstructed at the present locations or at other locations, which are owned by the municipalities or the water companies.

The transmission mains and distribution networks have to be constructed on public land (e.g. streets). The same facts apply to the waste water treatment facilities.

Furthermore, the Programme will most likely not propose any measures that will lead to land acquisition. However, land acquisition is an issue that the water companies should know how to deal with (resettlement framework program and resettlement action plan).

Due to the construction works income losses for shop owners, etc. can occur. A reduced income to kiosk owners and small traders due to limited access to kiosks and shops is possible.

Mitigation:

General information related to these issues is recommended to be shared between the municipality and the water companies.

Development of Resettlement Action Plans in case any resettlement actions will take place in the future.

Foresee and provide alternative access routes to kiosks and select proper timing for civil works and / or compensate impacted people.

6.12. Biodiversity and Sustainable Management of Living Natural Resources

Biodiversity Conservation is not a substantive issue in this instance other than natural and water resource management.

To reduce water losses in the supply system a complete refurbishment of the water supply network is recommended. Bulk water meters at important supply branches will help to detect leakages in the future. Additionally, the refurbishment of the wastewater collection and treatment system will minimize impacts on groundwater and soil.
The installation of a water management and monitoring program will help to reduce “wastage” of water resources. To introduce a management system, the installation of water meters above all in the transmission mains (bulk meter) is necessary. After installing house connection water meters and a payment system based on the actual consumption, the water wastage in the households will be reduced.

Energy efficiency measures through new and efficient pumps and use of renewable energy as far as possible will reduce impact on air and climate change and will reduce its impacts.

**Mitigation:**

Negative impacts arising from insufficient management of facilities will be minimised or eliminated through rehabilitation and proper maintenance and operation of all facilities. Additionally, a metering system will be installed in the whole water supply system.

Energy efficiency measures will be carried out.

Public awareness campaigns will in addition reduce the water wastage and will maximize the benefits from the Programme and individual sub-projects.

A monitoring system will be installed in order to measure compliance with objectives on a regular basis.

6.13. **Impacts on Flora, Fauna and Habitats**

No significant impacts on endangered species or habitats are envisaged during the Programme implementation.

Nevertheless, the necessity of tree cuttings can occur.

**Mitigation:**

During the planning phase, close cooperation between the design office and the environmental department is recommended. Solutions have to be found to minimize the amount of tree cuttings.

In case of necessary tree cutting the owners have to be compensated and additional trees should be planted.


The Programme is unlikely to have any specific impact on indigenous people.

6.15. **Impact on Cultural Heritage**

Construction works can lead to the finding of artefacts that could have historical value, whether these are simple renovations or new constructions. A careful approach will be adopted, with information spreading to contracted workers in relevant sub-projects.

As chance finds are frequent and since community in general as well as staff of the water companies are relatively ignorant of the cultural value in chance finds, excavations and reconstruction of existing water supply network and any new constructions related to this investment has a potential negative impact on cultural heritage.

**Mitigation:**

Information related to the investment and chance finds is required for project implementation team, consultants as well as water companies’ staff.
It is recommended that the project implementation support provide and ensure basic trainings and develop written Chance Finding Procedures when performing repairs or new constructions. This could be done in cooperation with the Ministry of Culture.

6.16. Issues Related to Stakeholder Engagement

This Programme is considered to be mainly positive in relation to stakeholder issues, inter alia, because:

- Public is mainly positive to the investment as it will lead to improved water supply and wastewater services, this includes all existing and potential customers, the city administration and all almost relevant stakeholders.
- Staff and management is mainly positive, although somewhat suspicious to changes as they do not completely understand how the relevant sub-project under the Programme will impact on their working conditions.

Mitigation:

In addition, some general risks and respective mitigation measures are identified below:

- **Stakeholders:** Engagement with public is, however, within the sphere of influence of the Vodokanals and communication will be essential for a successful investment. All stakeholders in the SEPs are important. However, how they are prioritised will vary during Programme’s implementation and cannot be completely foreseen at this stage. This also means the SEPs will have to be continuously adapted.

- **External grievance mechanism:** It is essential that clear communication lines to the water companies and grievance mechanisms exist and that these are communicated to the general public so they know whom to contact and when this is feasible (telephone number, e-mail address and visiting address).
7 Stakeholder Engagement and Disclosure

7.1 Stakeholder Identification

7.1.1 Stakeholder Identification Process

One of key emphasis of the EBRD during the project definition and then throughout the project lifecycle is on continuous stakeholder engagement that should meet the requirements of the EBRD ESP and PR10: Information Disclosure and Stakeholder Consultation. The governing principles of stakeholder engagement are:

- Start identification and analysis of stakeholders early and update stakeholder information on key phases of the project development;
- Start the stakeholder engagement process at the early phase of a project and continue it throughout the entire project life;
- Disclose necessary project information to enable a meaningful consultation with project stakeholders;
- Advise potentially affected parties; and
- Provide a procedure for local communities or interested stakeholders to make comments or complaints.

7.1.2 Key Stakeholders

Stakeholder identification has started at the planning phase of the Programme and was based on the results of the previous EBRD water projects in Tajikistan. The following groups of stakeholders have been identified at various levels (local, district, regional and national) within each sub-project area of influence under the Programme:

- Customers (local communities and organisations) of water and wastewater services;
- Water users’ organisations and companies;
- Local and regional governments and authorities;
- Local non-governmental organisations (”NGOs”);
- Local businesses and industries; and
- Other stakeholders.
### Table 2: Key stakeholders of the Programme

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customers of water and wastewater services</strong></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>Recipients of services from the water companies in the relevant sub-project area are the direct beneficiaries of the given sub-project. Sustainability of the sub-project largely depends on their participation and support.</td>
</tr>
<tr>
<td>Budget and commercial organisations</td>
<td>The budget and commercial organisations in the sub-project area, like the households, are the end-beneficiaries of the sub-project. They contribute to the information campaign and to sustainability of the sub-project results.</td>
</tr>
<tr>
<td><strong>Water users’ and companies</strong></td>
<td></td>
</tr>
<tr>
<td>Local water companies</td>
<td>The new RSWCs will manage and implement SPPs and SEPs.</td>
</tr>
<tr>
<td>Tajikistan Water Supply and Sanitation Network</td>
<td>The network and its members are an important source of information for sharing experiences and innovative ideas.</td>
</tr>
<tr>
<td>Water Users’ Committees (&quot;WUCs&quot;)</td>
<td>The WUCs are the vehicles for communication and dialogue among the households, with the water companies and with other stakeholders.</td>
</tr>
<tr>
<td>Communal housing services</td>
<td>In charge of internal plumber upkeep in apartment blocks.</td>
</tr>
<tr>
<td>Heads of apartment blocks</td>
<td>Involvement in most of issues within their apartment blocks.</td>
</tr>
<tr>
<td><strong>Local and regional governments and authorities</strong></td>
<td></td>
</tr>
<tr>
<td>Hokhumsats</td>
<td>Involvement and decision-makers in most of issues within local communities. However, no direct control over the water companies.</td>
</tr>
<tr>
<td>Makhallas and Heads of Makhallas</td>
<td>As Hokhumat, Makhallas are involved in most of issues within their cities while Heads of Makhallas are involved in most of issues within their Makhallas</td>
</tr>
<tr>
<td>Makhallas Committees</td>
<td>As Hokhumat, Makhallas Committees are involved in most of issues within the cities.</td>
</tr>
<tr>
<td>Ministry of Water Resources of the Republic of Tajikistan</td>
<td>Owner of most of the water resources in rural and sometimes urban areas. Water provider for some water treatment plants</td>
</tr>
<tr>
<td>Sanitary Epidemiological Station (&quot;SES&quot;)</td>
<td>SES is monitoring the quality of drinking water supplied by the water companies. It is an important source of information on health problems caused by water and sanitation.</td>
</tr>
<tr>
<td>Antimonopoly Agency under the Government of the Republic of Tajikistan (&quot;AMA&quot;)</td>
<td>AMA supervises requests for tariff changes from the water companies.</td>
</tr>
<tr>
<td><strong>Local NGOs</strong></td>
<td></td>
</tr>
<tr>
<td>NGOs</td>
<td>A few NGOs are available. Most of NGOs are involved in projects on a short to medium term basis.</td>
</tr>
<tr>
<td><strong>Local businesses and industries</strong></td>
<td></td>
</tr>
<tr>
<td>Local industries</td>
<td>Reliance on their own water resources most of the time. Local Industries experience need for water on a regular basis if connected and should be good paysers. Big water users. Influence over the life of the city not confirmed.</td>
</tr>
<tr>
<td>Water dealers / water trucks</td>
<td>Providers of water in some areas where there is no network or no water delivered.</td>
</tr>
<tr>
<td>Water treatment plants</td>
<td>Responsible for operation of the water networks.</td>
</tr>
<tr>
<td>Water meters and accessories sellers</td>
<td>Provision of cheap water meters (Chinese mainly). Provision of tanks for water storage.</td>
</tr>
<tr>
<td><strong>Other stakeholders</strong></td>
<td></td>
</tr>
<tr>
<td>The media</td>
<td>Local newspapers, radio and television will be interested in the Programmes’s risks and impacts, mitigation and benefits.</td>
</tr>
<tr>
<td>Local schools</td>
<td>Local schools are interested in improving hygiene practices of schoolchildren who are effective agents of change and who may disseminate information in among their families and friends.</td>
</tr>
</tbody>
</table>

If stakeholders are not on the list above and would like to be kept informed about the Programme or individual sub-project, contact should be made with the EBRD who has the overall responsibility for stakeholder communications in respect of the Programme or the individual sub-project.

**Vulnerable groups:** Stakeholder engagement also targets at vulnerable groups in the local communities. These groups are those who expected to be disproportionally affected by the Programme and/or those less able to access information, participate in the consultation process or...
benefit from positive outcomes of the individual sub-project and the Programme as a whole, and, therefore, require special consideration throughout the consultation process. For this Programme, vulnerable groups could include women who should be allowed meaningful participation in consultations and in decision-making and economically weak household in the Programme area of influence who would need support in paying tariffs for water and wastewater services.

7.2. Public Consultation and Disclosure

7.2.1. Stakeholder Engagement Planning

Stakeholder Engagement Plans (SEPs) have been developed for all regions of the Programme during the Feasibility Study stage. The purpose of SEPs is to manage stakeholder engagement activities for the lifetime of the Programme. Stakeholder engagement has been planned in line with the national law and the EBRD requirements for Category B projects. The water companies covered in the Programme area have assigned staff responsible for respective sections of SEPs. Contents of SEPs developed under the Programme is summarised below.
<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHOM</th>
<th>WHY</th>
<th>HOW</th>
<th>WHO</th>
<th>WHEN</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication / information disclosure</td>
<td>Receivers of message or in communication</td>
<td>Argument for needed actions</td>
<td>Means of communication</td>
<td>Overall responsible manager</td>
<td>Timeframe</td>
<td>Measuring (annual review of performance)</td>
</tr>
<tr>
<td>Programme progress (during planning, construction and operation)</td>
<td>EBRD</td>
<td>A loan requirement</td>
<td>Written reports on technical as well as non-technical issues (formats to be developed)</td>
<td>Director</td>
<td>Yearly and upon request</td>
<td>No. of reports related to what issues</td>
</tr>
<tr>
<td></td>
<td>State of Tajikistan</td>
<td>For structured follow-up and strategic decision making</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KMK &amp; RWSCs</td>
<td>For structured follow-up and strategic decision making</td>
<td>Structured meetings (technical and non-technical challenges and solutions)</td>
<td>By giving input to yearly written reports (or even writing parts of such reports)</td>
<td>Director</td>
<td>Meetings every month to discuss relevant sub-project progress (technical and non-technical)</td>
<td>No. of meetings and issue of meetings</td>
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<td></td>
<td>For close cooperation</td>
<td></td>
<td></td>
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<td></td>
<td>Shared aims of the investment project</td>
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<td></td>
<td>City Administration</td>
<td>For closer cooperation and coordination</td>
<td>Bi-monthly meetings (integrated into general meetings at the City Administration)</td>
<td>Director in close cooperation with the Chief Engineer</td>
<td>Could be incorporated into above meeting structures, participating every second month</td>
<td>No. of meetings and issue of meetings</td>
</tr>
<tr>
<td></td>
<td>Municipal Department for Environmental Protection</td>
<td>For consistent monitoring of water quality, incl. sampling of waste water</td>
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<td></td>
<td>Sanitary Epidemiological Station</td>
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<tr>
<td>Staff in general</td>
<td>Sharing of progress to increase motivation and efficiency (share aims and expectations – discuss challenges and find solutions)</td>
<td>Oral monthly information meetings</td>
<td>A board at the administrative office with written information on what will be done, when and why, who this work involves and what is expected</td>
<td>Director and HR officer</td>
<td>During construction and operational phase</td>
<td>No. of meetings and issue of meetings</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Frequency of meetings and information sharing in general to be evaluated on a yearly basis with staff</td>
<td>No. of meetings and issue of meetings</td>
</tr>
<tr>
<td>Society at large</td>
<td>Reduction of complaints</td>
<td>TV and Radio: Initial information sharing related to the investment project</td>
<td>Head of customer relations in close cooperation with the</td>
<td>Messages to be planned for the entire investment period</td>
<td>No. of complaints areas of complaints (schedule, service,</td>
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<tr>
<td></td>
<td>General interest</td>
<td></td>
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<td>WHAT</td>
<td>WHOM</td>
<td>WHY</td>
<td>HOW</td>
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<td>Indicators</td>
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<tr>
<td>of the community</td>
<td></td>
<td>What will be done, who are involved and who are financing activities.</td>
<td></td>
<td>Chief Engineer</td>
<td></td>
<td>different project phases (e.g. initial phase, yearly and final)</td>
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<td></td>
<td></td>
<td>● Information sharing on the Programme and individual sub-projects’ progress as well as finalisation of construction.</td>
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<td></td>
<td>information)</td>
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<td></td>
<td></td>
<td>● SMS for people signing up for such service (will contain general information)</td>
<td></td>
<td></td>
<td></td>
<td>No. of complaints via municipality</td>
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<td></td>
<td></td>
<td>● Information sharing on the Programme and individual sub-projects’ progress as well as finalisation of construction.</td>
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<td>No. of notifications given within the agreed time frame</td>
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<td></td>
<td></td>
<td>● SMS for people signing up for such service (will contain general information)</td>
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<td></td>
<td></td>
<td>No. of TV and radio spots on what issue</td>
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<td></td>
<td></td>
<td>● SMS for people signing up for such service (will contain general information)</td>
<td></td>
<td></td>
<td></td>
<td>No. of people signing up for SMS communication</td>
</tr>
<tr>
<td>Shop owners</td>
<td></td>
<td>● Reduction of complaints</td>
<td></td>
<td>Head of customer relations in cooperation with the Project Implementation Unit (“PIU”)</td>
<td>Planning phase</td>
<td>No. of written information sheets to shop owners</td>
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<td></td>
<td></td>
<td>● Foresee and provide alternative access routes to shops where necessary</td>
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<tr>
<td>Awareness about health and water management</td>
<td></td>
<td>● General public (special messages directed towards children and families)</td>
<td></td>
<td>Head of customer relations in close cooperation with the Chief Engineer</td>
<td>End of construction phase</td>
<td>No. of TV and Radio spots on issue 1 and 2</td>
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<td></td>
<td></td>
<td>● Specific target groups, such as youth, children in kindergartens, students, the elderly</td>
<td></td>
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<td>No. of people aware of water borne diseases (baseline with focal group)</td>
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<tr>
<td></td>
<td></td>
<td>For increased public health</td>
<td></td>
<td></td>
<td></td>
<td>No. of outreach projects to e.g. schools and most significant change stories on results</td>
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<tr>
<td></td>
<td></td>
<td>● Develop target group-specific communication and awareness raising strategies and measures and referring to the specific background and experiences of different groups</td>
<td></td>
<td></td>
<td></td>
<td>No. of joint projects with NGOs and most significant change stories on results</td>
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<td></td>
<td></td>
<td>When developing the strategies and measures taking a gender and diversity perspective into account</td>
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<td></td>
<td></td>
<td>● TV and Radio with short messages directed at different groups (e.g. children, adults (women and men). E.g. an awareness campaign on 1. How to handle water and waste water for environmental protection and 2. Water-borne diseases and their impact on health</td>
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<tr>
<td></td>
<td></td>
<td>● Educational work at public institutions (schools, universities etc.) and other</td>
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<tr>
<td>WHAT</td>
<td>WHOM</td>
<td>WHY</td>
<td>HOW</td>
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<td>Indicators</td>
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</tbody>
</table>
| Awareness about responsibilities in in-house repairs | General public (special messages directed towards customers) | ● For increased water responsibility (in-house repairs) | ● TV and radio with short messages directed at different groups (e.g. children, adults (women and men), Information made available about the availability of the grievance mechanism | Head of customer relations in close cooperation with Director | Start investment sub-project (when general information is shared about the investment) | ● No. of TV and Radio spots on what issue  
● No. of meetings with relevant institutions (heads of Makhallas, housing associations, private companies)  
● No. of outreach projects to e.g. schools  
● No. of new contracts clarifying responsibility issues  
● No. of households that invest in in-house plumbing |
| Access to the external grievance mechanism at the water companies | Customers and general public | So customers know to whom, when and how they can complain or discuss services | ● Information in leaflets, posters at public spaces, possibly need for radio/TV spots on telephone number, address, e-mail, opening hours who to contact where at the water utility (possibly a ‘hotline’ could be established.  
● SMS system could be used to measure public satisfaction with the water services in town, easily 2000 users could answer questions directly in SMS twice a year or the like | Head of customers’ dep. (for the use of SMS system a specialist in this matter must be contracted) | Simultaneously as with upstart of sub-project and a permanent service to customers and the general public (SMS system should be put into place within the first 12 months of the sub-project) | ● No. of information material that includes information about the grievance mechanism  
● No. of complaints (what kind of complaints)  
● SMS public monitoring results |
| Industries and private enterprises | ● For increased water responsibility  
● Meetings with larger private enterprises  
● General public information | Head customer relations in close cooperation with the | Start investment sub-project (when general information is shared about the investment) | No. of meetings with private industries and enterprises (content) | |
<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHOM</th>
<th>WHY</th>
<th>HOW</th>
<th>WHO</th>
<th>WHEN</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>- For increased payment of bills (and timely) and signing of contracts</td>
<td>- No. of information material that includes information about the grievance mechanism</td>
<td>- Increased transparency in purchase</td>
<td>- Legal requirement</td>
<td>- Clear procedures and policies related to purchase of equipment</td>
<td>- PIU</td>
<td>- Start of investment sub-project with final written procedures and training by mid-term of each sub-project</td>
</tr>
<tr>
<td>Anti-corruption measurements</td>
<td>Water companies’ owners, staff and suppliers</td>
<td>- For increased transparency in purchase</td>
<td></td>
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</tbody>
</table>
The Programme will seek to maintain multiple stakeholder participation opportunities throughout its lifetime and after.

7.2.2. Stakeholder Participation Plans and Dissemination of Information

Stakeholder Participation Plans (SPPs) were prepared and implemented across the Programme area. These plans are based on stakeholders’ analysis and subsequent verification, review of SEPs, baseline surveys and identified information needs for each stakeholder group. SEPs were largely integrated into the SPPs since both plans follow the purpose of stakeholder engagement and information disclosure and encompass the same categories of stakeholders.

The information campaign was planned in implement across the Programme area to support implementation of SEPs and SPPs. The Programme formulated several topics that were addressed by the information campaign: (i) tariffs, (ii) level of services, (iii) clean water, hygiene and health, (iv) conservation and rational use of water, (v) consumer rights and obligations, and (vi) the Programme, sub-projects and SPPs. Information campaign was widely supported by key stakeholders and supported improvement in public awareness across the Programme area.

Various media were selected and used to ensure most effective communication to specific stakeholder groups including:

- PowerPoint presentations;
- Leaflets and handouts;
- Posters and information desks;
- School water days and open classes;
- Cartoon adaptation and TV spots;
- Pocket and wall calendars;
- Articles in local newspapers, and
- Meetings.

Continuous stakeholder engagement was also enabled by establishing of the Water Users’ Committees (WUCs) at the level of neighbourhood associations to gather concerns and complaints of households, to support the consultation process and to assist with the dissemination of information.

7.3. Public Grievance Mechanism

7.3.1. General Approach to Public Grievances

Since a grievance can be an actual or perceived problem that might give grounds for complaint approach of the Programme will be to work proactively towards preventing grievances through the implementation of impact mitigation measures (as identified by the ESAPs) and community liaison.

Anyone will be able to submit a grievance related to the Programme if they believe a practice is having a detrimental impact on the community, the environment, or on their quality of life. They may also submit comments and suggestions. All feedback to be received will help the Programme and the water companies in understanding stakeholders’ concerns related to the individual sub-project and will inform managerial decisions timely and promptly to respond to existing concerns and prevent any in future.

7.3.2. Confidentiality and Anonymity

The Programme will aim to protect a person’s confidentiality when requested and will guarantee anonymity. Individuals will be asked permission to disclose their identity. Investigations will be
undertaken in a manner that is respectful of the aggrieved party and the principle of confidentiality. The aggrieved party will need to recognise that there may be situations when disclosure of identity is required and the Programme will identify these situations to see whether the aggrieved party wishes to continue with the investigation and resolution activities.

7.3.3. Grievance Reporting and Resolutions

Information about each sub-project grievance procedure and the relevant contact information will be made available on websites of the water companies and local municipalities.

Grievances will be logged in a formal logging system for which the community liaison officers (“CLOs”) will be responsible. CLOs will be appointed within each water utility and residents may register grievances using the form that will be disclosed to the communities or by contacting the respective CLO. Contact details for the CLOs will be included in appropriate Programme communication materials and disclosed to the communities and other interested stakeholders.

The CLO will classify grievances as detailed in Table 4. Where investigations are required, project staff and outside authorities as appropriate, will assist with the process. The CLO will collaborate with the respect water utility management to identify an appropriate investigation team with the correct skills to review the issue raised. The investigation will also aim to identify whether the incident leading to the grievance is a singular occurrence or likely to reoccur. Identifying and implementing activities, procedures, equipment and training to address and prevent reoccurrence will be part of the investigation activities.

### Table 4: Grievance classification criteria

<table>
<thead>
<tr>
<th>Classification</th>
<th>Risk Level (to health, safety or environment)</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>No or low</td>
<td>CLO will conduct investigation, document findings and provide a response.</td>
</tr>
<tr>
<td>Medium</td>
<td>Possible risk and likely a one off event</td>
<td>CLO and an appropriate investigation team will conduct investigation. If investigation is during the construction phase of the Programme the PIU Project Manager or Occupational Health and Safety Manager may decide to stop work if necessary during the investigation to allow the corrective preventive actions to be determined. The CLO will provide a response.</td>
</tr>
<tr>
<td>High</td>
<td>Probable risk and could reoccur</td>
<td>The CLO will organise or request the PIU Project Manager (during the construction phase) to organise a Major Investigation Team for prompt investigation and resolution. Work may be stopped in the affected area. The CLO will provide a response.</td>
</tr>
</tbody>
</table>

The CLO will explain in writing to the complaintant (or where reading is an issue orally) the review process, the results, and any changes to activities that will be undertaken to address the grievance and how the issue is being managed to meet appropriate environmental and social management systems. In some cases, it will be appropriate for the CLO to follow up at a later date to see if the person or organisation is satisfied with the resolution or remedial actions.

The CLO will summarise grievances monthly at the preparation phase, weekly during construction and bi-annually during operation removing identification information to protect the confidentiality of the complainant and guaranteeing anonymity. The procedure will be at no cost and without retribution to Programme/individual sub-project affected persons and stakeholders. The procedure for processing grievances is depicted in Figure 1.
Figure 1: Flowchart for Processing Public Grievances

- **Grievance received (in verbal or written format)**

  → **Record the data in the Grievance Register**

  → Acknowledge all complaints within 7 days.

  - YES
    - **Category and organize investigation of grievance. Immediate action is satisfactory complaint**
      - **Record the data in the Register**
      - Inform complainant of corrective action
      - Record the case. Close the case.
  - NO
    - **Identify any long-term corrective action required**
      - **Inform complainant of the proposed corrective action or clarify why action is not required within 30 days**
      - Implement the corrective action and carry out the follow-up of the corrective action
8 Environmental and Social Action Plan (ESAP)
### PR1 - Assessment and Management of Environmental and Social Impacts and Issues

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
<th>Environmental &amp; Social Risks (Liability/Benefits)</th>
<th>Requirement (Legislative, EBRD PR, Best Practice)</th>
<th>Resources, Investment Needs, Responsibility</th>
<th>Timetable</th>
<th>Target and KPIs for evaluation of successful implementation</th>
<th>Monitoring activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1A</td>
<td>Develop an EHS Programme based on EBRDs recommendations for future corporate structure</td>
<td>To commence the transition towards full compliance with environmental standards and EBRD’s performance requirements. The development of an environmental policy is headed by the RWSC and supported by different stakeholders in assistance to Water Utility.</td>
<td>EBRD PR1 (PR2, PR4) Voluntary and best practice</td>
<td>External and own resources RWSC Water Utility City Administration External consultant (e.g. PIU consultant)</td>
<td>To be completed 9 months after assignment of corporate development consultant and updated constantly for the whole duration of the Bank’s Loan for the Project</td>
<td>Corporate Policies, Procedures, and Templates based on local conditions developed Operational Manual Environmental Monitoring Plan, H&amp;S Plan, Emergency Plan</td>
<td>Annual EHS Report to the bank</td>
</tr>
<tr>
<td>1.2A</td>
<td>Develop and implement an EHS Training Programme</td>
<td>Development of Trainee-Workshops for recently recruited staff members including EHS issues. Seminars and workshops to discuss and share the corporate plan, amend, and adapt corporate materials.</td>
<td>EBRD PR1 Best practices</td>
<td>External and own resources Water Utility RWSC External Consultant</td>
<td>To be completed 12 months after assignment of corporate development consultant. Permanent action.</td>
<td>All staff is trained timely; Amount of trained staff Maximize No. of staff regularly trained about water quality and the effect on water borne diseases.</td>
<td>Annual Report (number of trainings)</td>
</tr>
<tr>
<td>1.3A</td>
<td>Develop a training programme to ensure that water utility staff has knowledge of water borne diseases</td>
<td>All staff has knowledge of water borne diseases and the responsibility of the water utility related to this issue in the community.</td>
<td>EBRD PR2, PR4</td>
<td>RWSC Water Utility City Administration External Consultant</td>
<td>To be completed 12 months after assignment of corporate development consultant. Permanent action.</td>
<td>Number of performed trainings and information events, evidence of trained staff</td>
<td>Annual Report</td>
</tr>
<tr>
<td>No.</td>
<td>Action</td>
<td>Environmental &amp; Social Risks (Liability/Benefits)</td>
<td>Requirement (Legislative, EBRD PR, Best Practice)</td>
<td>Resources, Investment Needs, Responsibility</td>
<td>Timetable</td>
<td>Target and KPIs for evaluation of successful implementation</td>
<td>Monitoring activity</td>
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<td>1.4A</td>
<td>Establish annual monitoring and reporting arrangements. Prepare and provide AESR to the EBRD as per Loan Agreement covenant.</td>
<td>Assessment of performance and of the implementation of the EHS Programme as well as the ESAP itself.</td>
<td>EBRD PR1, PR2 Best Practices</td>
<td>External and own resources: RWSC Water Utility; External Consultant</td>
<td>To be undertaken at the end of each calendar year.</td>
<td>Core procedures for monitoring and reporting EHS management processes established and codified</td>
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<tr>
<td>1.5A</td>
<td>Definition of principles / requirements for contractors and suppliers.</td>
<td>Contractors and suppliers keep environmental and social responsibility</td>
<td>EBRD PR1, PR2 Best Practices</td>
<td>Own resources: RWSC Water Utility</td>
<td>To be completed 6 months after establishment of RWSC. Permanent action.</td>
<td>No. of checked / reviewed contractors / suppliers. EHS and labour contractual obligations within the concluded contracts</td>
<td>Annual Report</td>
</tr>
<tr>
<td>1.6A</td>
<td>Establish, maintain, and strengthen as necessary an organisational structure.</td>
<td>Clear definition of roles and responsibilities inside the water utility. Clear definition of key social and environmental responsibilities within the management (EHS Manager).</td>
<td>EBRD PR1 Best Practices</td>
<td>Own resources: RWSC Water Utility</td>
<td>To be completed 6 months after establishment of RWSC. Regularly updating</td>
<td>No. of defined responsibilities</td>
<td></td>
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<tr>
<td>1.7B</td>
<td>Define general actions during planning of water supply facilities, sewer networks and Waste Water Treatment Plant (WWTP).</td>
<td>The purpose of this actions is to reduce the disturbance in regards of dust, noise etc. of population during construction activities. Definition of a construction Plan to minimize the impact on the environment and the population.</td>
<td>EBRD PR1, PR3, PR5 Best Practices</td>
<td>External and own resources: Designer; PIU; RWSC; Water Utility; City Administration as required</td>
<td>To be completed 6 months after assignment of project implementation consultant</td>
<td>Number of complaints: Correspondence with authorities and residents showing agreement about planned locations of infrastructure and work schedule. Development of a Construction Plan. Contractors’ Construction Environmental and Social Management Plans. Contractors statement with regard to ongoing implementation of EHS systems</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Action</td>
<td>Environmental &amp; Social Risks (Liability/Benefits)</td>
<td>Requirement (Legislative, EBRD PR, Best Practice)</td>
<td>Resources, Investment Needs, Responsibility</td>
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<td>Monitoring activity</td>
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<td>PR2</td>
<td>Labour and Working Conditions</td>
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<tr>
<td>2.1A</td>
<td>Revise salaries and set them according to education, years of experience and level of responsibility</td>
<td>Fair salaries for all employees according to education, years of experience and level of responsibility. Salaries and salary scales revised with a gender perspective to ensure women are not discriminated against.</td>
<td>EBRD PR2 Labour Code</td>
<td>Own resources (HR Manager) RWSC Water Utility</td>
<td>To be completed 6 months after establishment of RWSC</td>
<td>Salaries and salary scale correspond to education, years of experience and level of responsibility; % of women’s salary scale to that of men; % of women’s salaries to men; % increase in salaries of men and women; Rate of staff turnover.</td>
<td></td>
</tr>
<tr>
<td>2.2A</td>
<td>Develop and implement transparent and meritocratic procedures for recruitment</td>
<td>Transparent and meritocratic recruitment to positions in the operation, management</td>
<td>EBRD PR2 (PR7) Labour Code and Best practices</td>
<td>Own resources (HR Manager) RWSC Water Utility Labour Union Support of External Consultant</td>
<td>To be completed 6 months after establishment of RWSC</td>
<td>Recruitment policy developed; % of women in management positions; Gender equality plan developed; General non-discrimination policy and plan developed; No. of HR trained staff; Personal and organisational development tools developed; Increased employees’ motivation; Increased retention of staff</td>
<td>Annual Report</td>
</tr>
<tr>
<td>2.3A</td>
<td>Update job description and workers’ rights</td>
<td>Job descriptions and workers’ rights are clear and transparent</td>
<td>EBRD PR2 (PR7); Labour Code and Best practices</td>
<td>Own resources (HR Manager) RWSC Water Utility Labour Union</td>
<td>To be completed 6 months after establishment of RWSC</td>
<td>No. of updated job descriptions and informed workers about their rights; increased employees’ motivation; increased retention of staff</td>
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</tbody>
</table>

Note: RWSC Water Utility
<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
<th>Environmental &amp; Social Risks (Liability/Benefits)</th>
<th>Requirement (Legislative, EBRD PR, Best Practice)</th>
<th>Resources, Investment Needs, Responsibility</th>
<th>Timetable</th>
<th>Target and KPIs for evaluation of successful implementation</th>
<th>Monitoring activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4A</td>
<td>Establish an internal and external grievance mechanism</td>
<td>Internal and external grievance mechanism established including a standard timetable for the handling of grievances and an appeal mechanism</td>
<td>EBRD PR2, Labour Code and Best practices</td>
<td>Own resources RWSC Water Utility Labour Union</td>
<td>To be completed 6 months after establishment of RWSC</td>
<td>Proportion of internal grievance cases being handled successfully through the mechanism within the agreed time frame; increased employees’ motivation; increased retainment of staff; increased customers’ relations</td>
<td></td>
</tr>
<tr>
<td>2.5C</td>
<td>Define a construction health and safety plan</td>
<td>To reduce the risk of accidents and health risks for the workers. Public and occupational H&amp;S risks during construction will be reduced.</td>
<td>EBRD PR2 and PR4 Labour code and Best practices</td>
<td>Design Consultant; Construction Company. Supervision by: Water Utility; RWSC; Waste Utility; UES; SES</td>
<td>To be completed 6 months after assignment of project implementation consultant*. Execution during construction phase</td>
<td>Construction H&amp;S Plan Road traffic management plan Supervision</td>
<td>Quarterly reports from contractors. Annual Report</td>
</tr>
<tr>
<td>2.6C</td>
<td>Define and implement safety actions for trench works</td>
<td>To reduce the risk of accidents and health risks for the workers working in trenches. Definition of safety procedures (bracing support, signage, etc.). Adequate trainings on safety during works in trenches. Definition of supervision responsibilities. Adequate signing and protection from unauthorized access</td>
<td>EBRD PR2 Best Practices</td>
<td>Own and external resources (H&amp;S Manager) Water Utility Construction Company</td>
<td>To be completed 6 months after assignment of project implementation consultant. Execution during construction phase</td>
<td>Amount of accidents Executed trainings and evidence of trained staff</td>
<td>Quarterly reports from contractors. Annual Report</td>
</tr>
<tr>
<td>2.7D</td>
<td>Define and implement safety actions for confined space works</td>
<td>To reduce the risk of accidents and health risks for the workers working in confined spaces. Adequate trainings on safety during works in confined spaces.</td>
<td>EBRD PR2 Best Practices</td>
<td>Own resources (H&amp;S Manager) Water Utility</td>
<td>To be completed 12 months after loan payment</td>
<td>Amount of accidents Executed trainings and evidence of trained staff</td>
<td>Execution permanently Annual Report</td>
</tr>
<tr>
<td>No.</td>
<td>Action</td>
<td>Environmental &amp; Social Risks (Liability/Benefits)</td>
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<tr>
<td>PR3</td>
<td>Resource Efficiency and Pollution Prevention and Control</td>
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<tr>
<td>3.1A</td>
<td>Develop and implement a Water Safety Plan</td>
<td>To ensure the quality of water supply to the population. Within this plan the risks for pollution blackouts of the current/future water supply system are described and measures to avoid those situations are defined.</td>
<td>EBRD PR3 &amp; 4, WHO guidelines</td>
<td>External and own resources RWSC Water Utility Support from external consultant</td>
<td>To be completed 18 months after assignment of corporate development consultant</td>
<td>Higher water safety standards for the customers after implementation of a Water Safety Plan Status of development and implementation</td>
<td></td>
</tr>
<tr>
<td>3.2A</td>
<td>Develop and implement an Emergency Plan for case of insufficient water quality</td>
<td>To reduce the risk for the population of insufficient water quality.</td>
<td>EBRD PR3 &amp; 4, Best Practices</td>
<td>External and own resources; RWSC; Water Utility; City Administration; External consultant</td>
<td>To be completed 18 months after assignment of CDP consultant</td>
<td>Reduction of health risks for the population Status of development and implementation</td>
<td></td>
</tr>
<tr>
<td>3.3B</td>
<td>Define used water resources with the lowest impact on the environment and the society</td>
<td>Lower impact on underground water sources and population.</td>
<td>EBRD PR 3, PR 4 and PR 6</td>
<td>Own resources; UES; SES; Water Utility</td>
<td>To be completed 6 months after assignment of PIU consultant*</td>
<td>Definition of impacts by use of different water sources Frequent testing of water quality of different sources</td>
<td></td>
</tr>
<tr>
<td>3.4C</td>
<td>Develop and implement a construction site management plan</td>
<td>To minimize the impact on the environment and the society the development of a construction site management plan is recommended.</td>
<td>EBRD PR3, PR2, PR4 and PR6</td>
<td>Design Consultant company; supervision of contracted Supervision company; Construction’s Site Manager and EHS Responsible; Water Utility; RWSC; PMU; UES</td>
<td>To be completed 6 months after assignment of project implementation consultant * Execution permanently during whole construction phase</td>
<td>Construction contractor’s site Manager and EHS Responsible in place. Construction site management plan including work instructions for environmental aspects in place and implementation monitored; Internal auditing and reporting by contractor; Verification of trainings completed</td>
<td></td>
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<tr>
<td>No.</td>
<td>Action</td>
<td>Environmental &amp; Social Risks (Liability/Benefits)</td>
<td>Requirement (Legislative, EBRD PR, Best Practice)</td>
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<tr>
<td>3.5C</td>
<td>Minimize noise impacts on the population</td>
<td>Lower disturbance of population during construction and operation works due to deviation of the work schedule. Follow the work schedule. Residents living along the route/ near to operation places will have the opportunity to bring in complaints about elevated noise levels or vibrations through the planned grievance procedure.</td>
<td>EBRD PR3  Best practices</td>
<td>External and Own resources Design Consultant Construction Company Water Utility</td>
<td>To be completed 6 months after assignment of PIU consultant* Execution permanently during whole construction phase</td>
<td>In case of disturbances of population due to deviation of work schedule announcement of delay No. of complaints</td>
<td>Monthly inspection of construction works to monitor conformance with construction work schedule.</td>
</tr>
<tr>
<td>3.6C</td>
<td>Minimize impact on soil, surface water and groundwater</td>
<td>Reduce potential soil erosion/compaction during earthworks and to minimize potential damages on lands through construction traffic. Avoid littering of construction site. Spill prevention, minimize construction activities itself and their impacts during works in groundwater aquifers and surface water bodies; Soil handling procedures; Safe storage of oils, liquids, hazardous material, etc.</td>
<td>EBRD PR3  Best practices</td>
<td>Elaboration by design consultant prior to construction works; implementation under supervision of contracted Supervision company Construction’s Site Manager and EHS Responsible; RWSC; Water Utility PMU; UES</td>
<td>To be completed 6 months after assignment of project implementation consultant* Execution permanently during whole construction phase</td>
<td>Construction contractor’s site Manager and EHS Responsible in place Construction site management plan including work instructions for environmental aspects in place and implementation monitored; Internal auditing and reporting by contractor</td>
<td>Annual Accident Report</td>
</tr>
</tbody>
</table>

D: Own resources Water Utility; UES; SES

To be completed 12 months after loan payment Execution permanently

D: Grievance mechanism for cases of disturbances of population due to deviation of work schedule grievance procedures

Monthly Control of Complaints

D: Frequent water quality checks at the WWTP to ensure the quality of the diverted water is according Tajik environmental law.
<table>
<thead>
<tr>
<th>No.</th>
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<tbody>
<tr>
<td>3.7C</td>
<td>Minimize environmental and social impacts while using oil, chemicals and hazardous materials</td>
<td>C: Reduce pollution of soil and water at construction site with oil, chemicals and hazardous materials. Refuelling and washing of vehicles and trucks in designated areas with spill protection; Stockpiling of soil away from sensitive areas; Collection of hazardous wastes and delivery to designated landfills/dumpsites for subsequent reprocessing</td>
<td>EBRD PR3 Best practices</td>
<td>External and Own resources; Design Consultant Construction Company RWSC; Water Utility PIU</td>
<td>To be completed 6 months after assignment of PIU; Execution permanently during whole construction phase</td>
<td>Documentation on accidents and unforeseen spills and other liquid spills</td>
<td>Annual Report</td>
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<td>D: The same as above, but excluding stockpiling of soil away from sensitive areas</td>
<td>Own resources; Water Utility; UES; SES</td>
<td>To be completed 12 months after loan payment</td>
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<td></td>
<td>Execution permanently</td>
</tr>
<tr>
<td>3.8C</td>
<td>Minimize dust emissions</td>
<td>C: Air contamination through dust from heavy vehicles at work area. Use of covered trucks, covering of waste, watering of roads and work areas when dust emission during construction is high. Speed limits for unpaved roads.</td>
<td>EBRD PR3 Best practices</td>
<td>External and Own resources; Construction Company; Water Utility Waste Management Company; UES</td>
<td>Execution permanently during whole construction phase</td>
<td>Dust concentration Supervision by the client (or a supervision company) and the urban ecological services</td>
<td>Checked monthly</td>
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<td></td>
<td>D: Air contamination through dust from heavy vehicles at work area and waste water disposal; Reduction of open operational area, watering of roads and work areas when dust emission during operation is high.</td>
<td>Own resources Water Utility UES</td>
<td>To be completed 12 months after loan payment</td>
<td></td>
<td>Dust concentration monitoring results and report</td>
<td></td>
</tr>
<tr>
<td>3.9C</td>
<td>Develop and implement proper Solid Waste Management</td>
<td>C: Prompt collection, segregation, and disposal of waste to the designated landfills and collection sites. Disposal of removed pumps, etc. by delivering them to scrap metal collection sites, or to special storage (Recycling). Collection of hazardous wastes (incl. fluorescent lamps) and delivery to designated landfills/dumpsites.</td>
<td>EBRD PR3 Environmental laws and best practices</td>
<td>External and Own resources Design consultant Water Utility Construction Company</td>
<td>To be completed 6 months after assignment of PIU consultant&quot; Execution permanently during whole construction phase</td>
<td>Monitoring and documentation of solid waste management practices</td>
<td>Quarterly Status Report</td>
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<tr>
<td></td>
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<td>D: Generation of wastes, recyclables and hazardous wastes, further as above</td>
<td>Own resources; Water Utility; Waste Utility; Municipality</td>
<td>To be completed 12 months after loan payment</td>
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<tr>
<td>3.10C</td>
<td>Minimize air emissions</td>
<td>C: Increased traffic of heavy vehicles during construction works (temporarily)</td>
<td>EBRD PR3, PR1 Best practices</td>
<td>External and Own resources; Construction Company; Water Utility; Waste Management Company; UES</td>
<td>Execution permanently during whole construction phase</td>
<td>Reduction of driven truck kilometres and reduced fuel consumption</td>
<td>Annual GHG Emission Report</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D: Reduction of CO₂ emissions; Implementation of future transport management system with trucks with low fuel consumption, high loading capacity and optimized route planning</td>
<td>Own resources Water Utility UES</td>
<td>To be completed 12 months after loan payment Execution permanently</td>
<td>Reduction of driven truck kilometres and reduced fuel consumption</td>
<td>Fermentation gas concentration monitoring results and report</td>
<td>Execution permanently</td>
</tr>
<tr>
<td>3.11D</td>
<td>Avoid wastewater disposal with relatively high content of organic compounds</td>
<td>Reduce the risk of contamination due to fermentation gas and wastewater entering Surface and ground water; Frequent water quality checks at the WWTP to ensure the quality of the diverted water is according Tajik environmental law. Lower safety risks.</td>
<td>EBRD PR3 Best practices</td>
<td>Own resources Water Utility UES SES</td>
<td>To be completed 12 months after loan payment</td>
<td>Fermentation gas concentration monitoring results and report</td>
<td>Execution permanently</td>
</tr>
<tr>
<td>3.12D</td>
<td>Ensure proper maintenance of Waste Water Disposal / Sanitation Facilities</td>
<td>Improve the working condition for staff Negative impacts arising from insufficient waste water / sanitation facilities will be minimised or eliminated through proper maintenance and operation of all facilities.</td>
<td>EBRD PR3 and PR4 Best practices</td>
<td>Own resources; Water Utility; City Administration; SES; UES</td>
<td>To be completed 12 months after loan payment</td>
<td>Documentation of Maintenance and repair measures No. of health and safety trainings</td>
<td>Execution permanently</td>
</tr>
<tr>
<td>3.13D</td>
<td>Define Wastewater and sludge handling precautions</td>
<td>Minimising disruption to the wastewater treatment operations during sludge removal; operator safety during sludge removal; Prevention of sludge spillage during removal and transport</td>
<td>EBRD PR3, PR4 Environmental laws Best Practice</td>
<td>Own resources Water Utility Urban hygiene services SES</td>
<td>To be completed 12 months after loan payment</td>
<td>Documentation of sludge utilisation No. of accidents because of sludge and wastewater handling</td>
<td>Execution permanently Annual Report</td>
</tr>
<tr>
<td>No.</td>
<td>Action</td>
<td>Environmental &amp; Social Risks (Liability/Benefits)</td>
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<tr>
<td>3.14D</td>
<td>Define chlorine handling procedures</td>
<td>Decrease risks to public health, operator health, public safety considerations particularly for chlorination at the city centre sites; environmental concerns</td>
<td>EBRD PR3, PR4, Environmental laws, Best Practice</td>
<td>Own resources Water Utility Urban hygiene services SES</td>
<td>To be completed 12 months after loan payment</td>
<td>Documentation of chlorine utilisation No. of accidents because of chlorine handling</td>
<td>Execution permanently</td>
</tr>
<tr>
<td>3.15C</td>
<td>Potential risk for the health of employees and contractors in a long-term perspective</td>
<td>Clearly map the location of the pipeline part made of materials presumably containing asbestos and pass this information to the municipalities for information in the urban planning works. In case of any refurbishment or demolition works required on asbestos-containing pipeline sections, the special provisions and mitigation measures will be developed in the design documentation. The special requirements for potential construction contractors shall also be included into the tender documentation, namely to detect whether asbestos is present in the pipeline material with the help of a specialist laboratory, as well as to ensure compliance with the international requirements on asbestos handling, including development of the appropriate procedure and the appropriate PPE use. If there is a need for direct contact with materials containing asbestos, it is highly recommended that specialized contractors are hired who have the appropriate training and experience. Where possible, avoid any contact with asbestos-containing materials</td>
<td>EU laws and regulations EBRD PRs</td>
<td>External and Own resources Design consultant Water Utility Construction Company</td>
<td>To be completed 6 months after assignment of PIU consultant* Execution permanently during whole construction phase</td>
<td>Monitoring and documentation of solid waste management practices</td>
<td>Quarterly Status Report</td>
</tr>
<tr>
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<tr>
<td>PR4</td>
<td>Health and Safety</td>
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<tr>
<td>4.1A</td>
<td>Provide Personal Protection Equipment for workers</td>
<td>Lower risk of injuries due to adequate Personal Protection Equipment</td>
<td>EBRD PR4, 2 Best Practices</td>
<td>Own resources RWSC Water Utility</td>
<td>To be implemented immediately latest 3 months after loan effectiveness. Permanent action.</td>
<td>Procurement of Personal Protection Equipment</td>
<td>Annual Safety Report</td>
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<td></td>
<td>C: Own and external resources Construction Company Water Utility</td>
<td>C: To be completed 6 months after assignment of PIU consultant *</td>
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<tr>
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<td></td>
<td>C: Amount of injuries Procured Personal Protection Equipment</td>
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<tr>
<td>4.2A</td>
<td>Develop and implement health and safety measures during waste water collection, disposal and sludge handling. Develop and Implement a Health and Safety Plan (also for C)</td>
<td>To provide and implement high quality standards concerning workers' health and safety through an Environmental Health and Safety Plan to reduce the risk of accidents and injuries.</td>
<td>EBRD PR2, PR4 Best Practices</td>
<td>Own resources Water Utility RWSC Support of external Consultant</td>
<td>To be completed 12 months after assignment of corporate development consultant Measures are permanent actions.</td>
<td>Health and Safety Plan Health and Safety Trainings</td>
<td>Annual Safety Report</td>
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<td>C: Water Utility Urban hygiene services SES</td>
<td>C: Environmental Health and Safety plan Staff training</td>
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<tr>
<td>4.3A</td>
<td>Provide supporting equipment to increase workers safety</td>
<td>Reduction of occupational health and safety impacts associated with workers which occur during the operational phase due to: provision of vehicles with audible reversing alarms and visible reversing lights; provision of communication tools for workers; provision of washing areas and areas to change clothes; provision of ventilators; provide air conditioned cabs for heavy mobile equipment</td>
<td>EBRD PR4,2 Best Practices</td>
<td>Own resources Water Utility RWSC</td>
<td>To be completed latest 12 months after loan effectiveness Execution permanently</td>
<td>Number of accidents / incidents Health and Safety Plan Health and Safety Trainings</td>
<td>Annual Safety Report</td>
</tr>
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<tr>
<td>4.4A</td>
<td>Provide firefighting equipment for operational yard of Water Utility</td>
<td>Reduced fire risks to workers and public. Development / Adaptation of firefighting procedures and performance of trainings to ensure that workers are acting correctly during a fire.</td>
<td>EBRD PR4, PR2</td>
<td>External and own resources RWSC Water Utility City Administration / Fire department</td>
<td>To be completed immediately latest 3 months after loan effectiveness Trainings are permanent actions</td>
<td>Procurement of fire extinguishers and firefighting equipment. Development / Adaptation of firefighting procedures. Performance of firefighting trainings on a regular basis</td>
<td>Annual EHS Report</td>
</tr>
<tr>
<td>4.5A</td>
<td>Raise public awareness on health issues due to poor sanitation and wastewater collection</td>
<td>Inform relevant actors (e.g. parents, schools and hospitals as well as local NGOs – if existent) about water borne diseases, risk especially for children, and mitigation measurements they can take.</td>
<td>EBRD PR4, PR2</td>
<td>External and own resources; RWSC; Water Utility; City Administration</td>
<td>To be completed 12 months after establishment of RWSC; On a regular basis (e.g. every second year)</td>
<td>Number of performed trainings and information events</td>
<td>Annual Report</td>
</tr>
<tr>
<td>4.6B</td>
<td>Define infrastructure locations with the lowest impact on the environment and the society</td>
<td>To minimize the environmental and social impact when constructing new pipe networks and other facilities.</td>
<td>EBRD PR4 and PR6</td>
<td>Own resources; Design Company; UES/ Water Utility</td>
<td>To be completed 6 months after assignment of PIU consultant*</td>
<td>Construction Plan and implementation of regular inspections of construction sites by the client (or supervision company) and the UES</td>
<td>Regular inspections</td>
</tr>
<tr>
<td>4.7C</td>
<td>Avoid unauthorised access to the construction sites (D: to the facilities)</td>
<td>Lower health and safety impacts to the public C: Construction sites must be marked and enclosed by a fence and / or guarded D: All facilities must be enclosed by a fence and / or guarded</td>
<td>EBRD PR4</td>
<td>Own and external resources Construction Company Supervision by: Water Utility RWSC</td>
<td>Execution permanently during whole construction phase</td>
<td>Installed fences Supervision Execution permanently</td>
<td>D: As above, including Employed guards</td>
</tr>
<tr>
<td>No.</td>
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<td>4.8D</td>
<td>Ensure proper maintenance of Water Supply Facilities</td>
<td>Improve the working condition for staff Minimize negative impacts for the population (water quality, blackouts, will be minimised or eliminated through proper maintenance and operation of all facilities).</td>
<td>EBRD PR4 Best practices</td>
<td>Own resources; Water Utility; City Administration; SES; UES</td>
<td>To be completed 12 months after loan payment</td>
<td>Documentation of Maintenance and repair measures</td>
<td>Execution permanently</td>
</tr>
<tr>
<td>4.9D</td>
<td>Avoid pollution through vehicles leaving the WWTP</td>
<td>Dust Impacts to the Public Wheels of vehicles leaving active WWTP zone must be washed in the washing area</td>
<td>EBRD PR4 Best practices</td>
<td>Own resources; Water Utility; Urban hygiene services; SES</td>
<td>To be completed 12 months after loan payment</td>
<td>Daily use of washing area</td>
<td>Execution permanently</td>
</tr>
</tbody>
</table>

**PR5 Land Acquisition, Involuntary Resettlement, and Economic Displacement**

<p>| 5.1B | Ensure that private property is only used temporarily for access roads, construction works (if necessary and possible) | All water and sanitation infrastructure including access roads shall be exclusively constructed at public property. Exceptional Case: Temporary loss of land use and physical damage, limited access to fields, etc. resulting in reduced yield/harvest and thus reduced income/earnings. | EBRD PR5 Best Practices Tajik laws and regulations | External and own resources Design Company Construction Company Water Utility | To be completed 6 months after assignment of project implementation consultant* | Written construction plan showing location and schedule of works, list of affected landowners, confirmation that landowners are notified of works and agree to the actions; Written RAP and LRF | Construction Plan and supervision of construction | Execution permanently |
| 5.2B | Minimize damage to buildings and installations (C: impacts on buildings during construction works, D: during repair and maintenance works) | B: Identification of buildings and installations at risk prior to construction C: Avoid damage to the buildings and installations located in proximity to construction area. Prepare as part of the Construction Plan. | EBRD PR4, PR5, PR10 (SEP) | Own resources Design Company Construction Company Water Utility | To be completed 6 months after assignment of project implementation consultant* | | | Execution permanently |</p>
<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
<th>Environmental &amp; Social Risks (Liability/Benefits)</th>
<th>Requirement (Legislative, EBRD PR, Best Practice)</th>
<th>Resources, Investment Needs, Responsibility</th>
<th>Timetable</th>
<th>Target and KPIs for evaluation of successful implementation</th>
<th>Monitoring activity</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>D: Identification of buildings and installations at risk prior to repair works.</td>
<td>D: Own resources; Water Utility; Municipality</td>
<td>D: To be completed 12 months after loan payment</td>
<td>D: Avoiding damage of buildings Number of complaints and damaged property</td>
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<tr>
<td>5.3C</td>
<td>Minimize and compensate income loss to kiosk owners and small traders (D: during repair and maintenance works)</td>
<td>Foresee and provide alternative access routes to kiosks; select proper timing for civil works and / or compensate impacted people</td>
<td>EBRD PR &amp; Best practices External and Own resources Design consultant Water Utility Municipality PIU Tajik laws and regulations</td>
<td>To be completed 6 months after assignment of project implementation consultant*. Execution permanently during construction phase</td>
<td>Amount of compensated kiosk owners</td>
<td>Annual Report</td>
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<tr>
<td>5.4C</td>
<td>Provide safe alternatives for pedestrians during construction works (D: during repair and maintenance works)</td>
<td>Foresee and provide alternative walking roads and lanes Select proper timing for civil work</td>
<td>EBRD PR &amp; Best practices External and own resources Construction Company Water Utility Municipality PIU Tajik laws and regulations</td>
<td>To be completed 6 months after assignment of project implementation consultant* Execution permanently during whole construction phase</td>
<td>Amount of alternative pedestrian roads</td>
<td>Execution permanently</td>
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<tr>
<td>PR6</td>
<td>Biodiversity and Living Natural Resources</td>
<td>6.1B Minimize soil and slope erosion (C: avoid soil and slope erosion)</td>
<td>Proper stabilization and landscaping of slopes and replanting of vegetation</td>
<td>EBRD PR6, PR10 (SEP)</td>
<td>To be completed 6 months after assignment of project implementation consultant* Construction Plan and supervision of proposed safety precautions during construction by the client (or supervision company) and the UES</td>
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<td>Own resources; Designer; Construction Company; Urban ecological services / departments (UES)</td>
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<td>No.</td>
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<td>C: EBRD PR6 Best practices</td>
<td>C: Own resources; Construction Company; Water Utility; UES</td>
<td>C: Execution permanently during construction phase</td>
<td>C: Supervision of proposed safety precautions during construction</td>
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<tr>
<td>6.2C</td>
<td>Avoid damage to ecosystems and protected species</td>
<td>Develop procedures for protection of endangered plant and fauna species</td>
<td>EBRD PR6 Tajik laws and regulations IUCN Red List</td>
<td>Own resources; Design Consultant Water Utility UES</td>
<td>To be completed 6 months after assignment of project implementation consultant Execution permanently during construction phase</td>
<td>Construction Site Supervision on a regular basis</td>
<td>Execution permanently</td>
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<tr>
<td>6.3C</td>
<td>Minimize visual impacts</td>
<td>Reduced visual value of the area Proper landscaping and replanting of construction areas after completion of construction works</td>
<td>EBRD PR6 Best practices</td>
<td>Own resources; Design Company; Construction Company; Water Utility; UES</td>
<td>To be completed 24 months after assignment of project implementation consultant</td>
<td>Check of contract Construction supervision</td>
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<td>PR7</td>
<td>Indigenous Peoples (not applicable)</td>
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<td>PR8</td>
<td>Cultural Heritage</td>
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<td>8.1C</td>
<td>Avoid adverse impacts on the cultural heritage</td>
<td>Include explicitly the legal requirement on temporarily suspension of the works and informing the responsible authorities in the case of historical artefacts findings into the construction tender documentation.</td>
<td>Tajik laws and regulations EBRD PR8</td>
<td>External and own resources; RWSC; Water Utility; Construction company; Ministry of Culture</td>
<td>To be completed 6 months after establishment of RWSC Execution during pre-construction period</td>
<td>Procedures in place</td>
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<td>No.</td>
<td>Action</td>
<td>Environmental &amp; Social Risks (Liability/Benefits)</td>
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<td>8.2</td>
<td>Avoid adverse impacts on the cultural heritage</td>
<td>Develop and share chance finding procedures The purpose of this action is that any artefacts excavated and that is meaningful in terms of cultural heritage issues are properly taken care of.</td>
<td>EBRD PR8 Best practices Tajik laws and regulations</td>
<td>External and own resources; RWSC; Water Utility; Construction company; Ministry of Culture</td>
<td>To be completed 6 months after establishment of RWSC Execution is a permanent action</td>
<td>Procedures in place Trainings in procedures</td>
<td>Execution permanently</td>
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<tr>
<td>PR9</td>
<td>Financial Intermediaries (not applicable)</td>
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<td>PR10</td>
<td>Information Disclosure and Stakeholder Engagement</td>
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<td>10.1</td>
<td>Finalize and implement Stakeholder Engagement Plan</td>
<td>Please refer to the Stakeholder Engagement Plan for further information</td>
<td>EBRD PR10 Best Practices</td>
<td>External and own resources; RWSC; Water Utility; City Administration; External consultant</td>
<td>To be completed 12 months after assignment of corporate development consultant</td>
<td>Refer to SEP, SEP adopted, approved, implemented and disclosed to stakeholders through effective distribution channels</td>
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<td>10.2C</td>
<td>Inform the population about construction works / Information disclosure</td>
<td>Lower risks to the population on construction works, on the water supply &amp; wastewater services</td>
<td>EBRD PR10 Best practices</td>
<td>External and own resources; Water Utility; RWSC; Municipality; PMU</td>
<td>To be executed 6 months after assignment of project implementation consultant*</td>
<td>Number of complaints Correspondence with relevant authorities and local residents</td>
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</tbody>
</table>

*At least before start of construction works. Note: Urban ecological services / departments (UES)*
9 ESAP Enforcement and Monitoring

The ESAP that was prepared for the Programme will be agreed with the Beneficiaries and will form part of the financial agreements signed between the EBRD, KMK and RWSCs.

The implementation of ESAP will be monitored by the EBRD through Environmental and Social Reports provided by the RWSCs, and through specific monitoring visits at key development stages or if specific issues arise.
10 References

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