

**DEPARTMENT FOR THE DEVELOPMENT OF DRINKING WATER SUPPLY AND
WASTEWATER DISPOSAL DEVELOPMENT**

**UNDER THE MINISTRY OF WATER RESOURCES, AGRICULTURE AND
PROCESSING INDUSTRY OF THE KYRGYZ REPUBLIC**



Project Coordination Unit

CLIMATE RESILIENT WATER SERVICES PROJECT

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

**Water Supply System Rehabilitation Subproject for Kaiyndy, Kan, and Sary-Talaa
villages, Altyn-Beshik Subproject, Batken district, Batken region**

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Abbreviations

| | |
|-----------|---|
| AO | Aiyl Okmotu |
| ACM | Asbestos-Containing Material |
| BOD | Biological Oxygen Demand |
| WB | World Bank |
| BoQ | Bill of Quantity |
| Fuel | Fuels and Lubricants |
| DDWSWD | Department for the Development of Drinking Water Supply and Wastewater Disposal Development |
| KR | Kyrgyz Republic |
| PAP | Project Affected Persons |
| MWSE | Municipal Water Supply Enterprise |
| MWRAPI | Ministry of Water Resources, Agriculture and Processing Industry |
| MNRETS | Ministry of Natural Resources, Environment and Technical Supervision |
| GRM | Grievance Redress Mechanism |
| EIA | Environmental Impact Assessment |
| LSG | Local Self Government |
| EP | Environmental Protection |
| RPF | Resettlement Policy Framework |
| PCU | Project Coordination Unit |
| RAP | Resettlement Action Plan |
| CRWSP | Climate Resilient Water Services Project |
| DED | Design and Estimate Documentation |
| ESMP | Environmental and Social Management Plan |
| ACMMP | Asbestos-Containing Materials Management Plan |
| ESMF | Environmental and Social Management Framework |
| DDPCSSSES | District Disease Prevention Centers and State Sanitary and Epidemiological Surveillance |
| SanPiN | Sanitary Rules and Regulations |
| PPE | Personal Protective Equipment |
| Media | Mass Communication Media |
| SNiP | Construction Rules and Regulations |
| ESS | Social and Environmental Standards |
| SEA/SH | Sexual Exploitation and Abuse/Sexual Harassment |
| SMW | Solid Municipal Waste |
| PDO | Project Development Objectives |

Executive Summary

The Environmental and Social Management Plan (hereinafter - ESMP) for the Water Supply System Rehabilitation Subproject for Kaiyndy, Kan, and Sary-Talaa villages, Altyn-Beshik

Subproject, Batken district, Batken region is developed in accordance with the Environmental and Social Management Framework (hereinafter - ESMF), elaborated under the Climate Resilient Water Services Project (hereinafter referred to as the CRWSP), financed by the International Development Association.

The ESMP includes procedures and mechanisms for ensuring the requirements of the social and environmental standards of the World Bank (hereinafter - WB), provides for mitigation measures in accordance with the WB policy.

Legislation of the Kyrgyz Republic in the field of environmental and social environment protection, including laws, by-laws, procedures, regulations, SNiPs (construction norms and rules), and SanPiNs (sanitary norms and rules), serves as the basis for the implementation of this ESMP. . This ESMP will be implemented at the contractor's own expense, taking into account the funds allocated for a number of measures, in accordance with the bill of quantities. Monitoring of the implementation of this ESMP will be carried out within the framework of contracts of the Social and Environmental team of the Project Coordination Unit.

This ESMP provides information about geographical coverage of the project, the current state of the water supply system, the state of environmental and social conditions. Information about the implementation of the project, location and adopted technical solution is also provided. The document contains information about decisions on rehabilitation of the water supply system with a description of the main types of construction works.

One of the ESMP key chapters is the environmental and social impacts of the project and appropriate mitigation measures. In this chapter the types and means of mitigating the potential project's adverse social and environmental impacts are presented.

The types of environmental and social impacts during construction and operation are given in Section 6. This chapter describes the proposed actions and mitigation measures for each environmental and social parameter (soil, water resources, atmospheric air, waste generation, noise impacts, safety and health of workers and communities, etc.) with identification of responsible organizations and individuals.

Chapter 7 was developed to monitor the impact of construction works on the environment and social and to take appropriate measures, which specifies the parameters and methods of environmental and social monitoring.

This document describes the following information about:

- potential social and environmental impacts of the project;
- the current legal framework regulating the protection and use of natural resources;
- public hearings for population in the implementation of the project;
- grievance redress mechanism.

The requirements specified in the ESMP are mandatory for compliance by contractors. The construction contractor shall have dedicated personnel responsible for the implementation of the ESMP during the construction and installation stage. Appropriate PCU specialists will monitor the implementation of mitigation measures and compliance with good practice prescribed by this document, and in case of detection of deficiencies, will notify contractors of the identified issues and require corrective actions to be taken.

The ESMP activities will be included in bidding and contract documents, both within construction works and construction supervision.

Introduction

The Climate Resilient Water Services Project development objectives are to (i) improve access to water services in selected basins and (ii) improve institutional capacity for climate-resilient water supply and management services at local and national levels.

The project aims to improve - in selected river basins - the coverage, quality and efficiency of water supply, sanitation and irrigation services, as well as capacity building to improve integrated water resources management and the capacity of relevant service providers in the selected basins. At the national level, the Project will improve the institutional capacity of water resources management in terms of climate resilience. Regarding the first part of the PDO, climate resilient water services are defined as water services that achieve coverage and meet quality standards despite possible climate risks (droughts, high temperatures and extreme heat, urban flooding and wastewater overflows, floods and mudflows).

Investments in infrastructure will also help reduce (a) environmental pollution of Kaiyandy, Kan and Sary-Talaa villages; (b) public health risks associated with exposure to untreated wastewater in the event of climate change-induced flooding, and (c) the energy and greenhouse footprint of service provision. These investments will be designed to minimize greenhouse gas emissions by reducing energy consumption by (i) prioritizing gravity flow solutions for irrigation and drinking water supplies, (ii) improving pump efficiency for service delivery, (iii) reducing nitrous oxide emissions, methane and dioxide emissions carbon as well as biological oxygen demand (BOD) through adequate wastewater treatment and sanitation services and (iv) promoting water conservation through water accounting and on-farm activities. Consequently, this component, by its intensity, has an indirect benefit in terms of climate resilience.

The Environmental and Social Management Framework (ESMF) was prepared for the Project in accordance with the requirements of the WB Social and Environmental Standards. Each activity included in the project financing should comply with the environmental and social risks of the subproject and environmental legislation of the Kyrgyz Republic.

This ESMP outlines environmental impacts and mitigation measures related to the rehabilitation of water supply investments in Altyn-Beshik subproject. The ESMP activities will be included in bidding and contract documents as part of both construction and technical supervision phases.

Legal and Regulatory Framework

The fundamental principles of managing natural resources and the environment in order to ensure favorable conditions for human life, defining responsibility and compensation for damaged caused, are laid down in the Constitution of the Kyrgyz Republic. Kyrgyzstan has developed a legal framework that ensures the ongoing management of natural resources and the environment and regulates the legal relationship between users of nature and the state.

Current legislation regulates the protection and use of all types of resources: land, water, air, biodiversity, mineral resources. Legislation provides procedures and mechanisms for their management, such as: basic norms and rules for resource use, including norms and rules for charging fees for environmental use and pollution, environmental monitoring, impact assessment, environmental standards, environmental expertise, environmental control, etc.

The main laws governing environmental management, environmental protection and the need to conduct Environmental Impact Assessment (EIA) in the Kyrgyz Republic include:

- (i) Law on Environmental Protection (1999);
- (ii) Law on Environmental Expertise (1999);
- (iii) Law on Water (1994);

- (iv) Law on Interstate Use of Water Bodies, Water Resources and Water Management Facilities in the Kyrgyz Republic;
- (v) Law on General Technical Regulation for Ensuring Environmental Safety in the Kyrgyz Republic (2009);
- (vi) Law of the Kyrgyz Republic Technical Regulation on Safety of Drinking Water (2011);
- (vii) Law on Waste of Production and Consumption (2001);
- (viii) Procedure for Production and Consumption Waste Management in the Kyrgyz Republic (Government Resolution No. 559 dated August 5, 2015)
- (ix) Procedure for Hazardous Waste Management in the Kyrgyz Republic (Government Resolution No. 885 sated December 28, 2015)
- (x) Regulations on the Procedure for Environmental Impact Assessment in the Kyrgyz Republic (Government Resolution No. 60 dated February 13, 2015);
- (xi) Regulations on the Procedure for State Environmental Expertise in the Kyrgyz Republic (Government Resolution No. 248 dated May 7, 2014);
- (xii) Other laws regulating the protection and use of natural resources;
- (xiii) Land Code of the Kyrgyz Republic (2 June 1999, No. 45, as last amended on 5 August 2022, No. 85);
- (xiv) Law of the Kyrgyz Republic “On Transfer (Transformation) of Land Plots” (dated 15 July 2013, No. 145);
- (xv) Regulations on Asset Valuation: Asset valuation is carried out based on the Temporary Rules for Valuers and Valuation Companies (Government Resolution No. 537 dated 21 August 2003), Valuation Standards for Valuers (Government Resolution No. 217 dated April 2003.) 3, 2006) and other provisions of national legislation;
- (xvi) Civil Code of the Kyrgyz Republic (8 May 1996, No. 15, as last amended on 15 September 2021, No. 120);
- (xvii) Labor Code of the Kyrgyz Republic (4 August 2004, No. 106 (as amended in 2022));
- (xviii) Law of the Kyrgyz Republic “On Occupational Safety and Health” dated 1 August 2003 No. 167 (as amended in 2016);
- (xix) Law of the Kyrgyz Republic “On Occupational Safety and Health”, 2003;
- (xx) Law of the Kyrgyz Republic “On Local Self-Governance” No. 101 of 15 July 2011 (amended in 2019);
- (xxi) Law of the Kyrgyz Republic “On the Procedure for Consideration of Citizens' Appeals” No. 67 of 4 May 2007 (amended 2016);
- (xxii) Law of the Kyrgyz Republic “On the Rights and Guarantees of Persons with Disabilities” No. 38 of 3 April 2008.

When carrying out construction/rehabilitation works, the Contractor shall comply with all requirements of the Kyrgyz legislation, SNiP, SanPiN, and the requirements of the following social and environmental standards (hereinafter - ESS) of the World Bank. Otherwise, the PCU has the right to stop construction work until appropriate corrective action is taken and approved.

The project includes mitigation measures under the following World bank social and environmental standards:

ESS 1: Assessment and Management of Environmental and Social Risks and Impacts

ESS 2: Labor and Working Conditions

ESS 3: Resource Efficiency and Pollution Prevention and Management

ESS 4: Community Health and Safety

ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

1. General information about the Project area

1.1. Batken district of Batken region

Batken region is one of the three districts of Batken region of Kyrgyzstan. The administrative center of the district is the town of Batken. Batken district is located in the central part of Batken region. The northern part of the district is located within the southern edge of the Fergana valley, and the rest of the district is located in the foothill and mountainous part of the Alay Range. The highest elevation point in the district is 5621 m. The district borders with Leilek district in the west and Kadamjai district of Batken region of Kyrgyzstan in the east, with Tajikistan in the south and north, and with Uzbekistan (mainly with the Sokh exclave) in the north-east. The Vorukh exclave of Tajikistan is also located within the district.

The main rivers of Batken district are the Sokh (with tributaries Kojo-Ashkan, Archa-Bashy and Ak-Terek) and Isfara (in the middle reaches - Karavshin, with a tributary Kshemysh). There are glacial mountain formations on the district territory.

Batken district includes 9 aiyl aimaks and 47 villages.



Figure 1. Location of Batken district

1.2. Environmental and social baseline information for the Altyn-Beshik subproject

1.2.1. Geographical location

Kaiyndy, Kan and Sary-Talaa villages administratively belongs to Altyn-Beshik aiyl aimak. The water intake site under study is located in the Ak-Suu gorge in the foothills on the northern spurs of the Turkestan Range. Kaiyndy village is located 80 km from the regional center of Batken town, the distance from the water intake site (Dary-Suu) to the center of Altyn-Beshik aiyl okmotu is 90 km. Kan and Sary-Talaa villages are located 65 km from the regional center of Batken town, the distance to the water intake site is 4 km, and to the center of the aiyl okmotu - 75 km. The nearest railway station is located in Kyzyl-Kiya at a distance of -80-100 km from villages. Absolute elevations above sea level of Kan village - 1000 m, Kaiyndy village - 1100 m, Sary-Talaa village - 1400 m.

1.2.2. Social and economic characteristics

The population of Kaiyndy village is 1089 people living in 274 households, with a total area of 1900 square kilometers. Kan village has a population of 677 people living in 158 households, with a total area of 743.92 square kilometers. Sary-Talaa village has a population of 584 people living

in 142 households, with a total area of 553.5 square kilometers. The population is 100% Kyrgyz. The main population activities are livestock, agriculture, and small business. Women, who make up half of the village population, are mainly engaged in housekeeping. According to the passport of Altyn-Beshik aiyl okmotu, the following municipal social facilities are located in the aimak area:

- general educational institutions - 10;
- preschool institutions - 8;
- hospitals - 1;
- rural health post - 9;
- family medicine groups - 2;
- emergency room - 1;
- community centers - 6;
- libraries - 7;
- museum - 1;
- sports halls - 7;
- sports grounds - 4;

1.2.3. District climatic condition characteristics

The climatic characteristics of the work area given according to long-term observations of the Haidarken meteorological station in Annex No.1. The climate of the area is moderately continental. The average air temperature is -7.1°C , with an absolute minimum of -28°C and an absolute maximum of 36°C . Annual precipitation is 856 mm. The maximum depth of penetration of the zero isotherm under natural snow cover is 150 cm, depending on the height and duration of snow cover at the water intake site and water pipeline route. The distance from the reservoir and further along the distribution networks of Kaiyndy village is 130 cm. There are two options for the water intake site at the facility under consideration. The first option is the Dary-Bulak spring. The second option is the Suu-Bashy Spring.

Average outdoor air temperature by month, Haidarken MS $t^{\circ}\text{C}$

| I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII |
|------|------|-----|-----|------|------|------|------|------|-----|-----|------|
| -5.3 | -4.5 | 0.5 | 7.5 | 11.8 | 16.5 | 19.2 | 18.4 | 13.8 | 7.4 | 1.9 | -2.4 |

Outdoor air water vapor tension by month, hPa

| I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII |
|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|
| 2.4 | 2.8 | 4.5 | 6.7 | 8.5 | 9.2 | 9.6 | 8.4 | 6.2 | 4.9 | 3.7 | 2.8 |

- Average annual outdoor temperature: 7.1°C ;
- Absolute minimum air temperature: -28°C ;
- Absolute maximum air temperature: 36°C ;
- The calculated temperature of the coldest 5 days: -17°C ;
- Average temperature of the coldest period (ventilation): -6°C ;

Total solar radiation (direct and diffuse) on a horizontal surface under clear sky conditions by month, MJ/m^2

| I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | Year |
|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|
| 290 | 378 | 596 | 757 | 909 | 925 | 906 | 802 | 620 | 487 | 306 | 247 | 7223 |

1.2.4. Biodiversity

Flora. The vegetation is mainly represented by trees (American elm, white poplar, umbrella plant, common privet and many others) planted along the road and flowers. No plants listed in the Red Book of the K.R. were found on the construction area. The first fresh fruits and vegetables after winter are brought from here. Wheat, potatoes, onions, garlic, cotton, rice and fruit plantations are mainly planted. There is not a free piece of land here, everything is sown.

Fauna. The animal world is represented mainly by birds: sparrows, pigeons, thrushes, swifts, tits, crows, jackdaws, etc. Also represented by a small list of mammals: bats, rodents (house mouse, grey hamster, rats, etc.).

The construction site is located in the built up areas, which determines the presence of synanthropic animal species. No species listed in the Red Book of Kyrgyz Republic were found on the construction site or the adjacent territories.

1.2.5. Relief and geomorphological characteristics of Kaiyndy village

The village is located in an area of complex and contrasting mountainous relief, which was formed under the influence of powerful tectonic processes and intense erosion. The village is located on the southern slope of the Turkestan Range, which is part of the vast Pamir-Alai Mountain system. Kaiyndy is located in the foothills, on the slopes of one of the side gorges descending from the Turkestan Range to the foothill plain, on rugged terrain. Relief forms: steep and gentle slopes, the territory is dissected by a network of erosion forms - ravines and gullies, which are active during the rainy season and snowmelt. At the base of the gorges and at the bottom of the valleys, alluvial cones have formed, composed of pebbles, gravel, and loam. At the top of the village and higher up the gorge, there are outcrops of bedrock (limestone, shale, sandstone) in the form of rock exposures and scree slopes. This area is characterized by sharp changes in elevation over a short distance, creating a pronounced vertical geomorphological profile.

1.2.6. Geological and lithological characteristics of Kaiyndy village

There are two options for the water intake site at the facility under consideration. The first option is the Dary-Bulak spring. The second option is the Suu-Bashy Spring. The Dary-Bulak water intake site is located in the Dary-Bulak gorge. The Dary-Bulak spring emerges on a high steep slope (slope steepness over 50 degrees). It is a descending type spring with a scattered outlet. The water-bearing soils are gruss-rock and coarse medium gravel deposits and underlying rock masses consisting of fractured limestones and sandstones. At the time of the survey, the flow rate of the Dary-Suu Spring was 7-8 l/s.

The Suu-Bashy water intake site is located on the western side of the facility in the Suu-Bashy gorge.

The water-bearing soils are huge boulders and blocks (products of rock mass destruction) consisting mainly of fractured limestone. The soil category in terms of manual excavation difficulty is Y-YI. The flow rate of the Suu-Bashy Spring at the time of the survey was 14-15 l/s. The spring is of the descending type. According to local residents, the flow rate of the spring is constant. In geomorphological terms, the route is confined to the foothills of the northern slope of the Turkestan Range.

The geological structure of the route includes foothill complexes of modern deposits on colluvial-deluvial (at the foot of limestone ridges) and colluvial-proluvial (between limestone remains), represented in the relief by accumulative slopes, hilly and slightly hilly, with complex bedding at the base of the bedrock.

The geological structure of the water intake area consists of deluvial-proluvial deposits of the Upper Quaternary modern age (dpQiii-iy). Lithologically, it is represented by rubbly-boulder

deposits with sand-loam aggregates more than 5 m thick and medium-rounded fragmentary material. The petrographic composition is mainly represented by sandstones, limestones, and granodiorites.

The soil category according to the difficulty of manual excavation for rubbly-boulder soil is Y. The valley slopes are composed of rubbly-boulder deposits with sand-loam aggregate from bottom to top.

The geological and lithological structure of the water pipeline route mainly consists of deluvial-proluvial deposits of the Upper Quaternary modern age (dpQiii-iy). The soils along the route consist of gruss-rock and coarse medium gravels with sandy loam aggregate. The routes composed of different lithological varieties are indicated in the geological and lithological columns. All of the listed deposits are covered with a 0.30 m thick topsoil layer and 0.30 m-0.40 m thick fill soil under the roadbed. The thickness of the gruss-rock and coarse medium gravel deposits is more than 5 m. The fragmentary material of the gruss-rock and coarse medium gravels is angular and rounded. The soil category according to the difficulty of manual excavation for gruss-rock and coarse medium gravel deposits is Y-YI (SNiP IY-5-82). The estimated resistance to gruss-rock and coarse medium gravels is 4.5 kgf/cm² (SNiP 2.02.01-83). The groundwater level is at a depth of 5 m.

The water pipeline route from the Suu-Bashy water intake to the reservoir is mainly composed of gruss-rock and coarse medium gravel deposits with sand-loam aggregate, covered with a 0.30 m thick topsoil layer and fill soil under the roads. In some places, there are lenses and layers of sandy loam of small thickness. The thickness of gruss-rock and coarse medium gravel deposits is more than 5 m. The soil category according to the difficulty of manual excavation for gruss-rock and coarse medium gravel deposits is III-IY-Y. (SNiP-YI-5-82). The estimated resistance for gruss-rock and coarse medium gravels is 4.5 kgf/cm² (SNiP 2.02.01-83).

The reservoir site is located in the northwestern part of the existing Kojo Mativali mosque and consists of gruss-rock and coarse medium gravels with sand-loam fill, covered with a 0.30 m thick topsoil layer. The thickness of the gruss-rock and coarse medium gravel deposits is more than 5 m. The soil category in terms of manual excavation difficulty for gruss-rock and coarse medium gravels is III. (SNiP-YI-5-82). Groundwater lies at a depth of less than 7 meters from the ground surface.

1.2.7. Hydrogeological conditions and prediction of area flooding of Kaiyndy village

The hydrogeological conditions of Kaiyndy village are determined by its location in the foothills of the Turkestan Range and are characterized by complex interactions between surface and groundwater.

Water-bearing complexes: 1. Verkhovodka in Quaternary deposits - the uppermost and most important horizon for the population. It is confined to deluvial-proluvial loams with gravel on slopes and alluvial cones. It is fed by infiltration of atmospheric precipitation, irrigation water, and leaks from the irrigation network. The water level varies greatly depending on the season: it is highest in spring (snowmelt) and summer (intensive irrigation) and lowest in winter. It is this horizon that is most often tapped by wells in the village. 2. *Interlayer water in bedrock* is found in fractured zones of Paleozoic limestones and sandstones. Its depth can be tens of meters. Pressure (artesian) water can be tapped by springs in places where it naturally discharges along the slopes of gorges. It is used less frequently due to the difficulty of tapping it.

For the village, the risk of flooding is local and seasonal. It is not associated with large rivers or lakes, but is caused by local hydrogeological processes. Factors contributing to flooding include apparent water table in the spring and summer due to active irrigation and snowmelt in the mountains, the presence of poorly permeable soils at the base that prevent water from seeping

quickly into the ground, and disruption of natural drainage during road construction.

1.2.8. Relief and geomorphological characteristics of Kan and Sary-Talaa villages

Kan village is located in a lower and more level area than Sary-Talaa. There is a vast alluvial cone at the exit from one of the side gorges to the more open foothill plain. The relief is foothill, accumulative-erosional, and flat. Slightly sloping surfaces prevail. The territory of the village is formed by ancient and modern deposits (gravel, loam) carried by temporary watercourses from the mountains. The surface is relatively flat.

Sary-Talaa village is located on high and dissected terrain. Settlements are scattered across the middle and upper parts of the steep slopes of gorges and their spurs, directly adjacent to the highlands of the Turkestan Range. The relief is medium-mountainous, erosional-tectonic, deeply dissected.

1.2.9. Geological and lithological characteristics of Kan and Sary-Talaa villages

The Ak-Moinok spring emerges in the Ak-Moinok gorge from under large fragments of boulder-pebble soil. The outlet is scattered. The water-bearing soils are boulder-pebble deposits with sand-loam aggregate. At the time of the survey, the flow rate of the Ak-Moinok spring was 15 l/s. The category of difficulty for manual excavation is Y. The spring is of the descending type. According to local long-term residents, the flow rate of the spring is constant. In geomorphological terms, the route is confined to the foothills of the northern slope of the Turkestan Range.

The geological structure of the route includes foothill complexes of modern deposits on colluvial-deluvial (at the foot of limestone ridges) and colluvial-proluvial (between limestone remains), represented in the relief by accumulative slopes, hilly and slightly hilly, with complex bedding at the base of the bedrock.

The geological structure of the water intake area consists of deluvial-proluvial deposits of the Upper Quaternary modern age (dpQiii-iy). Lithologically, it is represented by rubbly-boulder deposits with sand-loam aggregates more than 5 m thick and medium-rounded fragmentary material. The petrographic composition is mainly represented by sandstones, limestones, and granodiorites. The soil category according to the difficulty of manual excavation for rubbly-boulder soil is Y. The valley slopes are composed of rubbly-boulder deposits with sand-loam aggregate from bottom to top.

The geological and lithological structure of the water pipeline route mainly consists of deluvial-proluvial deposits of the Upper Quaternary modern age (dpQiii-iy).

The soils along the route consist mainly of coarse medium gravel and gruss-rock and coarse medium gravel with sand-loam aggregate and large boulders. In the Up-5-Up-9 area, rocky soils consisting of fractured, weathered limestone come to the surface. In the Up-8-Up-13 area, the route passes over slide rocks represented by gruss-rock and coarse medium gravel with sand-loam aggregate. Slide rocks are found in hollows with rock outcrops, but most of them are small in size. The fragmentary material consists of gravel and boulders up to 0.5 m in size, and its composition is determined by the composition of rocks. Physical weathering of rocks exposed to the surface occurs under the influence of expansion, the splitting effect of freezing water, the destructive action of root systems, etc.

Weathered rocks form weathering circles, and the products of weathering may remain at the site of destruction or be transported to a certain distance under the influence of gravity, erosion, etc.

In places where bedrock outcrops, eluvial accumulations of fragmentary material gradually form, which roll down the slope under the influence of gravity. Routes composed of different lithological varieties are indicated on geological and lithological columns.

All of the above-mentioned deposits are covered by the topsoil layer with a thickness of 0.30 m and, under the road surface, by embankment soil with a thickness of 0.30-0.40 m. The thickness of the gruss-rock and coarse medium deposits is more than 5 m.

The fragmented material of the gruss-rock and coarse medium gravel is of medium roundness. The petrographic composition is mainly represented by limestones and sandstones. The soil category according to the difficulty of manual excavation for gruss-rock and coarse medium deposits is IY-Y (SNiP – IY-5-82). The estimated resistance of gruss-rock and coarse medium gravel is 4.5 kgf/cm² (SNiP 2.02.01-83). The filtration coefficient of gruss-rock and coarse medium gravel with a significant impurity of small particles is 20 to 60 m/day. Average is 40/m/day. The Ak-Moinok spring is fed by water seeping from the glaciers of the river.

The water pipeline route from the Ak-Moinok water intake follows the surface of the mountain slope along the existing irrigation ditch, to the reservoir, mainly composed of gruss-rock and coarse medium deposits with sand-loam aggregate, covered with a 0.30 m thick topsoil layer and embankment soil under the roads. In some places, there are lenses and layers of sandy loam of small thickness. The thickness of the gruss-rock and coarse medium deposits is more than 5 m. The soil category in the manual excavation difficulty for gruss-rock and coarse medium deposits is III-IY-Y (SNiP – IY-5-82). The estimated resistance on gruss-rock and coarse medium deposits is 4.5 kgf/cm² (SNiP 2.02.01-83).

The reservoir site is located in the area of the Kudayar-Khan fortress on an elevated mountainous area and consists of gruss rocks with sand-loam aggregate covered with topsoil layer with a thickness of 0.30 m. The thickness of the gruss rock is more than 5 m. The soil category in the manual excavation difficulty for gruss rock is III (SNiP – IY-5-82). Groundwater lies at a depth of less than 7 meters from the ground surface.

1.2.10. Hydrogeological conditions and prediction of area flooding of Kaiyndy village

Kan village: The village is located in an area of active formation of groundwater discharge from Quaternary deposits. The main aquifer is confined to alluvial-proluvial gravels and loams of alluvial cones and ancient terraces. These are non-pressure or low-pressure waters. The depth of groundwater is variable and strongly depends on the season and irrigation. On average, it can be 1.5–5 meters from the surface, and on the outskirts of the village or in depressions during floods and irrigation, it can rise to 0.5–1 meter, causing flooding. Natural drainage is difficult due to the slight slope of the terrain. Drainage occurs through evaporation and, possibly, weak underground runoff towards the main valley of the Ak-Suu River.

Sary-Talaa village: Fracture-vein waters of bedrock (limestone, shale). Pressure waters (artesian), discharged in the form of numerous springs on the slopes. The depth is highly variable. Verhovodka in deluvial trains. It is extremely unstable and seasonal in nature and is confined to areas of wedging out of impermeable layers on the slopes. Discharge occurs naturally and efficiently through springs and by underground runoff down the slope to settlements such as Kaiyndy and Kan. The area has good natural drainage. Flooding by slope waters: Local soil waterlogging at spring outlets or in areas with verhovodka can cause landslides and slope runoff.

1.2.11. Seismicity

Soil category of Kaiyndy, Kan, and Sary-Tala villages according to seismic properties in accordance with SNiP KR20-02:2009-II. According to SN KR 20-02:2024, Table G-1, the earthquake intensity of the studied site is IPE=8 points, peak acceleration PGAL, agR=0.29 (in fractions of g). Soil conditions type by seismic properties II (gruss-rock and coarse medium gravel). Calculated acceleration values – 0.370.

1.2.12. Archaeological and Cultural Monuments Characteristics

No archaeological monuments or finds were found in the area of interest. If artefacts and other signs of historical and cultural heritage materials, as well as fossils are found, it is necessary to stop all construction works and report the findings to the local government, the department of the Ministry of Culture, Information, Sports and Youth Policy responsible for the protection of cultural heritage and archaeological specialists. The subproject will not affect cultural and national heritage sites.

2. Scope of Works and Identification of Related Environmental and Social Impact Assessment

2.1. Scope of the Works

The adopted water supply systems for Kaiyndy, Kan, and Sary-Talaa villages include the following buildings and structures (separately for Kaiyndy and for Kan and Sary-Talaa):

1. Descending type intake structure (gravity-pressure water supply system), individual design
2. Water pipeline - 1
3. Steel round reservoir with a capacity of 200 m³ – 2 pcs.
4. Chlorinator room
5. Watchhouse - 1 pc.
6. Toilet for 1 point - 1 pc.
7. Water supply network.

The source of water supply for Kaiyndy village is underground spring water, descending type intake structure. The Suu-Bashy water intake site is located in the Suu-Bashy gorge. The flow rate of the Suu-Bashy Spring was 14-15 l/s.

The source of water supply for Kan and Sary-Talaa villages is underground spring water, descending type intake structure. The Ak-Moinok water intake site is located in the Ak-Moinok gorge. The flow rate of the Ak-Moinok spring was 15 l/s.

Water intake by descending springs is provided in the form of special chambers equipped with water intake openings and water-collecting walls, along which a prism of filtering materials is laid on the side of the underground water flow, connected to the reverse filter of the intake chamber. Intake chambers are constructed from prefabricated reinforced concrete d1500mm. The collected water from the receiving chamber is fed by gravity through water pipe No. 1 to round steel reservoirs with a capacity of 200 m³ each, to the reservoir site located 2100 meters from the northern side of Kaiyndy village in the highest area of the village's relief and to the reservoir site located in the northern part of Kan village in the highest area of the village's relief.

Prior to delivery to villages, water is decontaminated using chlorinator. From the reservoirs, water flows through water pipes into the village's distribution network.

The network is equipped with water wells with all the necessary pipe fittings, fire hydrants, and water meters. For water distribution, each well is equipped with two types of distribution nodes: threaded and welded.

Fire hydrants are installed on the water supply line to ensure external firefighting. Water consumption for firefighting is not included in the estimated daily water consumption. This consumption is provided in the form of a reserve in clean water reservoirs for a total of three hours of firefighting. The water supply network is verified by calculating the flow rate for firefighting, which coincides with the hour of maximum water consumption for domestic and drinking needs.

To indicate the location of a fire hydrant, signs are placed on the walls of the nearest houses in accordance with GOST 12.4.009-75 "Firefighting equipment for the protection of facilities.

General requirements." The signs are made and placed in agreement with the local fire authority by the population and economic organizations that use the water supply system.

Operational stage

After completion of construction work, operational activities will be carried out by the Municipal Water Supply Enterprise. As part of the project, training will be conducted for the operating organization. Repair and maintenance of the system will be the responsibility of the Municipal Water Supply Enterprise.

2.2.Environmental and Social Impact

The subproject's activities were also reviewed for compliance with the World Bank criteria and exclusion from the project. The planned work for the subproject is not included in the exclusion list. At the design stage, the PCU conducted environmental and social screening (Annexes 1, 2). Thus, the Altyn-Beshik subproject was assigned the category "moderate".

2.2.1. Environmental Risks

Construction stage

During the construction period, potential environmental risks and impacts resulting from small/medium scale activities for local communities will be limited and include temporary inconvenience from ongoing construction activities and may include: (i) increased pollution due to construction debris, (ii) generation of dust, noise and vibration due to operation, movement and maintenance of construction machinery and vehicles, (iii) risks due to inappropriate disposal of construction debris, and asbestos-containing materials, or small operational or accidental spills of fuel and lubricants from construction machinery on soil and water resources, (iv) inadequate restoration of construction sites upon completion of the works

Such potential environmental impacts will be quickly identified, moderate in magnitude and impact, and can be effectively avoided, minimized or mitigated by including specific measures in construction contracts for implementation by contractors, with strong supervision and control by the PCU and other routine mitigation measures.

The use of construction materials that are hazardous to human health (e.g. asbestos containing materials) is prohibited. Asbestos containing wastes will be collected, removed, and ultimately disposed of in a special protective manner, in accordance with established hazardous materials disposal standards in municipal solid waste landfill approved by government for the disposal of ACMs.

An Environmental and Social Management Plan (Table 1) and an Environmental Monitoring Plan (Section 7) were developed to mitigate impacts during the construction period. The costs for implementing environmental and social mitigation measures are specified in the Bill of Quantities of the subproject and have been taken into account by the contractor when submitting the tender documentation, including measures requiring separate funding, such as stripping of topsoil, tree planting, and dust suppression. Further details are provided in the "Cost of Measures" section of Table 1. Monitoring of the implementation of mitigation measures will be carried out in accordance with the contracts of the Social and Environmental Team of the PCU and the contracts of technical supervision. During implementation of activities, the PCU will have overall responsibility for supervision to ensure that the measures specified in the ESMP are properly implemented. The PCU in cooperation with the Altyn-Beshik subproject local authorities and the Regional Office of the Ministry of Natural Resources and Technical Supervision in Batken oblast shall carry out environmental monitoring of activities during the construction and operation stages.

The subproject will not support activities that have an impact on critical habitats, natural habitats or protected areas. In addition, no funding will be provided for activities that may cause substantial loss or degradation of significant areas of natural habitat.

Operational stage

Some negative impacts are possible during the operational stage: leaks in the water supply system, discharge of water when flushing water pipes; possible impact on people working directly with chlorine; contamination of groundwater in the absence of effective wastewater treatment and discharge of untreated water into the territory.

2.2.2. Social Risks

The activities planned under the subproject will have mostly positive social impacts. No significant negative risks are expected, potential social impacts may include:

- possible work-related injuries to workers;
- potential public safety issues due to construction work on the village streets;
- restrictions on land use as a result of construction activities (i.e., access to private properties);
- unauthorized access of the local communities to the operational sites;
- community dissatisfaction with the failure of existing communications;
- low involvement of women in the project;
- problems with household connections of the poor (low-income population);
- possible social resistance against tariff increases;
- limited capacity of local governments;
- actual delays in project implementation;
- change in behavior and water consumption practices.

Measures to mitigate these potential risks, institutional responsibility for implementing the measures, and monitoring are described in the Social part of the Environmental and Social Impact Mitigation Plan (Section 3).. .

In accordance with the Stakeholder Engagement Plan, developed for this Project, open social interaction is part of the Project's holistic approach to maintaining favorable relations with the local community. The Project uses various methods such as public consultations/hearings, social media, trainings and seminars, information boards and GRM.

To more effectively involve the local population in the decision-making process for a particular subproject, during the initial public hearing where information about the Project is provided, the PCU establishes a Village Water Committee (VWC) at the subproject level, consisting of representatives of aiyl okmotu, aiyl kenesh, elders' council, women council, youth council, vulnerable category of population, ethnic minorities, municipal water enterprise, as well as interested residents of the village.

The main purpose of establishing and interacting with the VWC is to facilitate the Project to broadly involve rural residents in the process of addressing the village water supply and sanitation issues, as well as in:

- dissemination among the rural residents of reliable information on the progress of the project on construction/rehabilitation of the WS and modernization of sanitary facilities of social institutions;
- assistance in increasing transparency and openness in the process of implementation of the Project activities;

- conducting joint monitoring of activities of aiyl okmotu and municipal water enterprise on water supply system management and provision of safe drinking water to the population.

Also, the VWC is part of the main tool for the preventing social risks/conflicts - the Grievance redress Mechanism, through which information is exchanged and community opinions are taken into account at all stages of the project. The GRM includes the consideration of appeals at the local level (Aiyl Okmotu) and at the central level (DDWSWD). Here, an important task of the VWC is the initial review, together with PCU representatives, of complaints/appeals arising from the local population regarding the subproject. The local population can contact the VWS in any convenient way and receive an answer/solution to the issue without contracting the Commission at the Aiyl Okmoty level. Thus, the VWC maintains a platform for preliminary dispute resolution that does not require the involvement of official representatives.

More details on the operation of the GRM are provided in Section 7 “Grievance Redress Mechanism”. Table 2 of the same section presents a matrix for managing appeals/complaints from citizens affected by the Project.

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2.2.3. Involuntary resettlement.

Land acquisition and resettlement issues fall under the WB ESS5 “Land Acquisition, Restrictions on Land Use and Involuntary Resettlement”. With regard to involuntary resettlement, no impacts have been identified that may result in land acquisition, restrictions on economic activities, or physical resettlement.

A resettlement framework document, the Resettlement Policy Framework (RPF), has been developed for the project. The framework document was made publicly available to the target community, through public hearings and published on www.tunuksuu.kg. The RPF guides the preparation of Resettlement Action Plans (RAPs) during project implementation.

In case of land acquisition, resettlement or damage to community assets, a Resettlement Action Plan will be prepared in accordance with the RPF.

According to design decisions, during construction, private lands will not be affected, all distribution networks, water pipelines will be laid by municipal participants; there will not be restrictions on land use (easement).

2.3. Proposed mitigation measures.

All work shall be performed only after the necessary permits and approvals are obtained.

Organizational Measures. Before starting construction work, local construction supervision and environmental protection inspections and the public shall be informed about the forthcoming activities through mass media and/or at sites open for public access (including works sites) by disclosing site-specific ESMPs for each subproject. All activities required for the implementation of environmental and social safeguards and monitoring shall be planned and budgeted in the work plans of the Employer, contractors and subcontractors. All work shall be performed in a safe and disciplined manner that minimizes impact on the public, the environment and the workers.

Air pollution control and dust minimization. During construction activities, waste should be stored in a controlled area and sprayed with water to reduce dust generation. Open burning of construction and household waste is not allowed at the site. When transporting any dust-forming materials to the rehabilitation site, the materials must be covered. Dust generation at the rehabilitation/construction site in dry seasons can be minimized by frequent watering the ground, while in hot seasons, it is necessary to spray water on the roads along the excavated trenches at least four times a day.

Prevention of soil and water contamination. Maintenance and refueling of construction machinery and equipment shall be performed at service centers located at the maximum possible distance from the work site. If this work is performed on-site, the contractor and the PCU will provide an impervious surface for refueling and have a supply of absorbents available in case of an accidental spill. Next, it is necessary to constantly inspect machinery and equipment in order to identify and eliminate malfunctions, as well as maintain mechanical equipment, tools and devices in order to prevent soil and water contamination. Car washing should be prohibited near surface water bodies. Used motor vehicle oil, fuel and lubricant supplies and other hazardous substances should also be stored on an impervious surface, preferably under cover, and should be protected from fire. Where workers' accommodation is located in construction camps, septic tanks or pit latrines shall be provided, and their operation shall not allow direct discharge of water into surface water bodies, contamination of ground water, soil or degradation of sanitary conditions.

Waste Management and Recycling. Waste should be minimized, segregated and handled appropriately. Open air burning and illegal dumping of any waste is strictly prohibited. Non-hazardous waste, as well as waste containing asbestos, will be segregated, labelled, evacuated and disposed of at designated landfills as per ACM Management Plan. Excess excavated soil will be returned to officially designated areas. The contractor must obtain permission from the local authorities to remove the waste. Construction equipment and machinery should be maintained at dedicated place at the construction camp. Worn tires, filters and waste oil shall be disposed by the licensed company based on transfer agreement. Containers with lids shall be installed for the collection of household waste. The issue of regular household waste removal should be coordinated with local authorities.

Disposal of dismantled asphalt. During construction, the head of the aiyl okmotu will provide a landfill for the disposal of dismantled asphalt; in the absence of a landfill, the asphalt will be transferred for processing to an asphalt production organization.

Asbestos-Containing Materials Management. During water system rehabilitation, the existing asbestos cement pipes will not be removed; it will be possible to leave existing pipelines in the ground as much as possible. The new water lines will be located parallel to the existing water mains. In cases where existing asbestos-cement pipelines are dismantled, the asbestos-containing materials will be collected, labelled, removed and finally disposed of using special protective measures in accordance with hazardous waste management plan.

The contractor shall develop an Asbestos-Containing Waste Management Plan (an example plan is given in Annex 4). Sanitary norms and rules No. 2.2.3.013-03 "Work with asbestos and asbestos-containing materials" must be observed when working with asbestos-containing waste. Asbestos-containing materials must be disposed of in authorized municipal landfills.

Tree Felling/Cutting Down. During construction of water supply networks, trees and shrubs may be cut down. No mass cutting is envisaged under this subproject. Before starting construction work, inventory of green areas along the route of the planned water pipeline should be carried out to identify the number of trees to be cut down. The cutting of trees on the municipality's balance sheet will take place only after the attainment of appropriate permits, taking into account compensation measures of cut green spaces in the ratio of 1:3. In the case of private tree felling, a RAP will be prepared in accordance with the WB ESS5. If trees of several owners are felled, one RAP can be prepared for a subproject.

Child and forced labor. According to the Labor Management Plan developed for this Project, the legislation of the KR prohibits persons under 18 years of age from performing construction and installation works that are classified as harmful to health and hard labor. Child labor and forced labor shall not be used in the subproject. The contractor shall make a commitment against the use of child and forced labor by requesting all necessary documentation upon hiring to confirm the

legal working age of the employee. If a minor below the minimum working age is found working on the subproject, measures will be taken for immediate dismissal and to hold the minor accountable, taking into account the best interests of the minor. The PCU staff responsible for supervising the contractor will monitor and report on the absence of child and forced labor. T

Safety and health of workers during construction works. Construction workers will wear appropriate personal protective equipment (hereinafter referred to as PPE):including but not limited to safety helmets, safety glasses, safety harnesses (belts), hand gloves, and safety shoes. Before starting construction work, workers shall be trained/instructed on the labor safety rules at the project sites. Further, it will be required to conduct constant inspection of machinery and equipment in order to identify and eliminate malfunctions, to observe equipment repair periods, to train and instruct workers who perform maintenance of mechanical equipment, tools and devices in safe methods and means of work. It is prohibited to: give defective or untested tools for work, as well as leave unattended mechanical tools connected to the electrical network or to compressed air hoses; pull out and twist cables and air hoses; cables and hoses must not intersect with wire ropes, electrical cables; it is prohibited to hold rotating elements of mechanized tools. The applicable national regulations on the safe operation of cranes/earthmoving machines and welding work must be strictly observed.

Procedures in case of accidental finds. Before starting construction work, the PCU shall instruct the contractor's working personnel in case cultural and historical objects are found. If a "chance finds" is discovered during excavation, the contractor shall implement the Chance find Procedure including immediately stopping all physical work on the site and notifying the PCU. The PCU should forward the information to the Ministry of Culture, Information, Sports and Youth Policy of the Kyrgyz Republic and suspend the work until written notification is received from the Ministry with permission to restart the work. The Procedure for chance finds and the Incident Form are specified in Annex 5.

Labor influx, SEA/SH. Workers from contractors brought to the subproject area for work are provided with temporary housing for the duration of construction and installation works. Monitoring the conditions related to temporary housing, food, and services provided to workers under the project is one of the key elements of managing OHS-related risks and promoting the health, safety, and well-being of project workers. The PCU will be obliged to raise awareness on the prevention and response to SEA/SH, the risks of which may increase due to the influx of labor into the subproject. The GRM will maintain confidentiality when handling complaints related to SEA/SH. The Contractor will be responsible for developing personnel management procedures and complying with the Code of Conduct, which contains provisions on SEA/SH.

Decision on the matter of disturbance to local communities. Local communities should be notified of the timing and scope of the planned works. Working hours should be strictly limited to daytime (08:00 to 18:00) on weekdays and the area should be sprayed with water to prevent dust generation. Protective warning tape should be installed along the perimeter of the trenches, and the trenches must be equipped with pedestrian crossing bridges with handrails at intervals no greater than every 200 meters. Warning signs and mobile banners with information about the works must be installed near the work sites. In the event of a traffic closure, the site must be provided with a flagger/traffic controller to coordinate the flow of vehicles. The routes children take to educational institutions must be under special surveillance. Temporary ramps must be provided in places that are difficult for wheelchairs and baby strollers to pass. Temporary storage of construction materials and debris shall be done in the subproject area, parking of construction machinery shall not block or restrict access of local residents to their property and public areas or, if unavoidable, alternative temporary access routes shall be organized. Waste and material storage

areas, work camps and access roads shall be identified by the Project works and clearly marked. All project employees shall comply with the Code of Conduct (Annex 3).

The following risk management and mitigation measures are required during the operational stage.

- Use of environmentally acceptable fuel.
- Regular maintenance (system warranty period is 12 months)
- Ensure that all warranties and certificates are obtained in accordance with fire safety requirements and emission/air concentration monitoring.
- Ensure correct and efficient use of water resources and prevent water losses, leaks and excessive water consumption - install, operate and periodically check water meters at water consumers.
- In the event of a leak, the operator must shut off the water supply, determine the location and nature of the fault, and then carry out repair work.
- Component 3 includes the procurement of equipment for operation and maintenance, as well as training in the operation of the system.
- When flushing the water mains, water will be discharged into irrigation canals.
- The contractor will develop instructions for the maintenance of the water supply system, including instructions for working with chlorine (or calcium hypochlorite or any other chemicals).
- The project will include training and information work.
- Proper control over the operation and efficiency of local treatment facilities.
- Regular monitoring of the efficiency of treatment facilities.
- Obtaining permission for water use in accordance with the requirements of the legislation of Kyrgyzstan.
- Timely cleaning of the outdoor toilet to be used as needed.

The table below lists the responsible parties and their associated activities.

| Responsible site | Description of duties |
|-------------------------|--|
| AiyI Okmotu | On a weekly basis, conducts working planning meetings with the participation of representatives of contractors, the municipal water supply company and regional project specialists in order to discuss and agree of a plan for civil works in certain areas of the village. Based on the results of joint planning of civil works, the AiyI Okmotu, through its quarterly employees, informs the population about upcoming civil works in their area. |
| Contracting company | According to the construction schedule, installs information boards and road signs at construction sites in order to regulate the movement of vehicles and the local population. Conducts daily briefings among its workers on occupational health and safety issues and Code of Conduct during construction work under the subproject. Takes action to prevent disturbances to the local community during construction work. |
| PCU DDWSWD | Dissemination of information among the local population about upcoming construction work schedules of contractors via WhatsApp messenger. |

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| | The PCU Technical Supervision Engineers and Regional Institutional Development Specialists provide support and control in the organization of the above activities under the subproject. |
| Village Water Committee | <p>Receives requests and complaints from the population regarding construction water supply system construction works and, together with the PCU Regional Specialists, discusses and makes decisions at the local level.</p> <p>Assists the PCU in the timely dissemination of information about the project activities under the subproject.</p> |

3. Environmental and Social Impact Mitigation Plan (Table 1).

| Environmental and Social Elements | Impacts and Risks | Proposed Environmental Impact Mitigation Measures | Cost of Mitigation Measures | Institutional Responsibility for the Implementation of Measures |
|-----------------------------------|--|--|--|---|
| Construction Period | | | | |
| Physical Environment | | | | |
| Noise and Vibration | <p>During construction works the sources of non-permanent noise and vibration are operating mechanisms (engines) of construction machinery and equipment.</p> <p>There may also be temporary increases in noise and vibration levels along material supply routes.</p> | <ul style="list-style-type: none"> • Machineries and equipment will be equipped with silencers. • Use of vibration devices that comply with standards, as well as vibration and noise protection devices. • Machinery and equipment will only work from 8 a.m. to 6 p.m., no work will be done at night or weekends. • During work, the engine covers of generators, air compressors and other drive mechanisms should be closed; the equipment should be located as far away from residential premises as possible. • Avoid the use of worn-out vehicles or heavy machinery producing significant noise and air emissions. • Workers will use earmuffs for noise reduction. | <p>Criteria /specifications to be incorporated into bidding and contract documents.</p> <p>It is not considered as a separate cost item.</p> | <ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PCU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. 3. PCU Environmental Specialist, Social Development Specialist and Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body. |

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| Soil Pollution | Soil and water contamination during leak detection; water contamination with fuel oil from the use of machinery During the construction period, impacts are accompanied by the following type of work: -earthworks: soil excavation, embankment, backfilling, levelling; -operation of construction machinery. -waste formation. | <ul style="list-style-type: none"> • Ensure proper selection of areas for construction site location, where SDW collection and safe toilets (possibly bio-toilets) should be provided. • Timely cleaning of territories from fuel oil in case of their contact with the soil • No washing of machinery and equipment in the construction area • Fueling of machinery will be carried out at specialized fuel stations • Vehicles with a defective fuel system exceeding the exhaust gas toxicity standards and hydraulic systems shall not be permitted. • Use of vehicles that have passed technical inspection • No storage and stockpiling of fuel and lubricants and construction materials is allowed to prevent pollution from entering the river • Daily inspections of machinery and equipment for oil leaks. | It is not considered as a separate cost item. | <ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PCU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. 3. PCU Environmental Specialist, Social Development Specialist and Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body. |
| | | <ul style="list-style-type: none"> • Topsoil Removal Improvement of the territory in accordance with the project. | It is considered as a separate cost item in the EP BoQ (288,0 m3) | |
| Atmospheric Air (dust pollution) | Dusting during reconstruction work will be minor and temporary. | <ul style="list-style-type: none"> • Dust suppression measures and appropriate household activities such as spraying water to prevent | Water irrigation of unpaved roads (wet dust suppression of on- | <ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of |

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| | <p>Air pollutant emissions are expected:</p> <ul style="list-style-type: none"> - from motor vehicles (machinery) -during road leveling -when using electrical welding. | <p>dust and use of curtains, and construction site fencing.</p> <ul style="list-style-type: none"> • Use of masks, gloves and protective clothing. • Limit vehicle speeds and select appropriate transportation routes to minimize exposure to dust-sensitive receptors. • Equip vehicles transporting bulk materials with removable tents. Cement is delivered to construction sites only in pre-packed hermetically sealed bags. • The above machinery is ordered only for the period of specific operations and is not permanently located at the construction site. • Vehicles with a defective fuel system exceeding the exhaust gas toxicity standards shall not be permitted. • It is prohibited to burn construction and household waste on the work site. • Keep the surrounding area clean and free from construction debris to minimize dust and contamination. • Organization of proper storage and transportation of flammable and hazardous materials (gas cylinders, bituminous materials, paints, solvents, glass and | <p>site roads and sites) is considered as a separate cost item in the EP BoQ (13 555km).</p> | <p>environmental and social mitigation measures.</p> <ol style="list-style-type: none"> 2. PCU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. 3. PCU Environmental Specialist, PCU Social Specialist and PCU Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body. |
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| | | rockwool). It should be noted that the construction of facilities will not take place in parallel, but in stages and sequentially, from one facility to another. | | |
| | Use of calcium hypochlorite (chlorine). | <ul style="list-style-type: none"> • During construction work, chlorine is not expected to be handled, so exposure is avoided. During operational period, it is possible for people working directly with chlorine (in the working area) to be exposed. Resolution of the Kyrgyz Republic dated 29.10.2019 No. 576 “On Approval of the Safety Rules for Handling Strong Poisonous Substances in the Kyrgyz Republic” | It is not considered as a separate cost item. | |
| Water resources | Pollution of ground and surface waters, soil flooding. | <ul style="list-style-type: none"> • Do not allow spills/leaks of fuel oil into the ground, in case of inadvertent spills remove contaminated soil and transport to appropriate locations. • Timely cleaning of areas from fuel oil in order to prevent their entry into local water courses and groundwater together with atmospheric precipitation. • Vehicles with a defective fuel system exceeding the exhaust gas toxicity standards and hydraulic systems shall not be permitted. | It is not considered as a separate cost item. | |

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| | | <ul style="list-style-type: none"> • Cleaning of outdoor toilet pit from liquid waste and its removal to the municipal treatment facilities according to the Removal Act • No excavation near groundwater sources. • Work areas with machinery, concrete mixers and fuel tanks should be located outside of water protection zones. • Installation of special pallets and other prefabricated equipment in places of possible leaks and spills of fuel and lubricants, technical solutions • Disinfection of pit toilet and filling with soil in accordance with building regulations. | | |
| | • | | | |
| Construction waste | Pollution of adjacent territories, soil and water resources. | <ul style="list-style-type: none"> • Before the start of works, to sign an agreement with the local municipality for disposal of construction and household waste at the municipal landfill. • Determination of methods of waste collection and disposal prior to the commencement of work, as well as locations for the main types of waste generated during demolition and construction work • Mineral waste from construction works and waste generated during dismantling of facilities shall be | It is not considered as a separate cost item. | |

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| | | <p>separated from organic, liquid and chemical wastes at the work site, after which they shall be stored at a proper site</p> <ul style="list-style-type: none"> • All materials and documentation of waste removal and disposal should be properly maintained as evidence of proper waste management practices on site as designed • Recycling of inert material waste (except asbestos) is allowed whenever possible • Construction waste shall be removed at the contractor's expense to the storage sites. | | |
| | Dismantled asphalt. | <ul style="list-style-type: none"> • During construction, the Head of the Aiyil okmotu will provide a landfill for the disposal of dismantled asphalt; • In the absence of a landfill, the asphalt will be transferred for processing to an asphalt production organization. | It is not considered as a separate cost item | |
| Asbestos-containing materials | Pollution of the surrounding area and adverse impact on human health. | <ul style="list-style-type: none"> • Some construction debris may contain asbestos. The Contractor shall train its employees to assess the presence of asbestos-containing materials and determine procedures for safe disposal of asbestos using appropriate protective equipment, storage in sealed containers. | It is not considered as a separate cost item | <ol style="list-style-type: none"> 1. The Contractor shall develop an Asbestos-containing Waste Management Plan 2. PCU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of |

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| | | <p>Safety requirements for asbestos management are specified in Annex 4.</p> <ul style="list-style-type: none"> • Asbestos should be handled and disposed of by qualified and experienced specialists using proper protection (masks, gloves and overalls). • Before removal (if removal is necessary), the asbestos will be treated with a wetting agent to minimize the generation of asbestos dust. • Asbestos-containing materials shall not be subjected to breaking or cutting. • Workers should avoid crushing/destruction of asbestos waste and dispose of it in an organized manner at construction sites with subsequent removal to designated areas or burial. • If asbestos material is to be temporarily stored, its waste must be securely isolated in closed containers and labeled as hazardous material. • Hazardous waste transportation to landfills is carried out by specially equipped own transport of the enterprise or specialized transport companies. | | <p>potential environmental and social risks.</p> <ol style="list-style-type: none"> 3. PCU Environmental Specialist, PCU Social Specialist and PCU Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body. |
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| | | <ul style="list-style-type: none"> • Transportation of unpackaged asbestos in open bodies of vehicles is not allowed. • ACM should be safely disposed of at a local hazardous waste landfill, if available, or at a municipal landfill after prior arrangements have been made with the landfill operator for safe storage. | | |
| Vehicles | Local air pollution, terrain; Hazard when moving around in a populated area; Hazard when maneuvering. | <ul style="list-style-type: none"> • Authorization of technically serviceable vehicles for operation • Observance of speed limits • Vehicle complete set is: medical kit; fire extinguisher; emergency stop sign or flashing red light; wheel stops (at least two). • Sound the horn when reversing • Open parking areas shall have markings identifying parking spaces and driveways. | It is not considered as a separate cost item. | <ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PCU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. |
| | Littering of adjacent property; Restriction of free movement of pedestrians and vehicles. | <ul style="list-style-type: none"> • Temporary storage of construction materials and debris shall be organized in the subproject area; • Parking of construction machinery and shall not obstruct or restrict local residents' access to their property and common areas. Arrange alternative temporary access routes if necessary. | It is not considered as a separate cost item. | <ol style="list-style-type: none"> 3. PCU Environmental Specialist, PCU Social Specialist and PCU Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body. |
| Organization of the construction site and dismantling of the site after completion | An adverse impact may occur if the Contractor fails to ensure that the area is cleared of construction | Ensure removal of all waste and construction debris from the facilities for disposal at a municipal authorized construction waste | It is not considered as a separate cost item. | |

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| of construction work | debris, production waste and reclamation of disturbed land during the construction process. | landfill in accordance with the Waste Disposal Contract. Ensure removal of materials, dismantled equipment, etc. | | |
| Biological Environment | | | | |
| Flora and fauna | Tree and shrub cutting when laying the pipeline routes. | <p>Tree and shrub cutting, crown pruning should be carried out strictly along pipe laying routes only after obtaining permits from territorial environmental authorities in coordination with the local governments, taking into account compensatory planting.</p> <p>If it is necessary to cut down municipal trees, the contracting organization should request a cutting permit from Aiyl Okmotu. Then, AO with the approval of the local environmental authorities will obtain a permit to cut down the specified number of trees.</p> <p>When the water pipeline route is completed, a tree inventory should be conducted with the municipality to identify potential trees to be cut for compensation.</p> <p>In case of cutting down municipal trees, compensation in the form of seedlings will be made (the compensation amount is stipulated in the bill of quantities (BoQ). For one tree felled, 3 will be planted.</p> <p>The contractor shall plant saplings in</p> | It is considered as a separate cost item in the EP BoQ (20 pcs) | <ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures on site. 2. PCU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. 3. PCU Environmental Specialist, PCU Social Specialist and PCU Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body. |

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| | | <p>the places determined by the aiyl okmotu (AO), drawing up a planting act.</p> <p>In the case of private tree felling, a RAP will be prepared in accordance with the ESS5. If trees of several owners are felled, one RAP can be prepared for a subproject.</p> | | |
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Social Environment

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| Occupational health and safety fire safety | Industrial/work placeinjuries | <ul style="list-style-type: none"> • Compliance with approved occupational health and safety instructions. • Conducting initial and repeated briefings on occupational safety and health (OSH) and fire safety for employees, as well as maintaining a briefing log. • All works have to be carried out using safety methods and disciplines to minimize the negative impact on the public and the environment. • Personal protective equipment must comply with safety standards (mandatory use of protective helmets, masks, if necessary, belts and shoes). • The contractor shall provide workers with: <ul style="list-style-type: none"> - drinking water during working hours; | It is not considered as a separate cost item. | <ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PCU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. 3. PCU Environmental Specialist, PCU Social Specialist and PCU Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body. |
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| | | <ul style="list-style-type: none"> - sanitary facility including mobile bio toilets when the crew works with more than 8 people; - medical kits for each construction site to render first-aid - anti-noise headphones, earplugs • Compliance with all fire safety requirements. Availability of equipped fire shields at the sites. • The sites will be equipped with appropriate information boards and signs informing workers about the rules and regulations of work. | | |
| Aesthetics and Landscape | Landscape disturbance can be associated with the accumulation of construction debris. | Once the works are completed, planning and restoration works will be carried out on the distribution network sections. | | |
| Historical and cultural sites | Negative impact on cultural heritage may destroy its value and the loss will be irreparable | Avoid Archaeological/ Historical/ Social/Cultural/ Religious sites during the site selection and construction period. If cultural heritage is discovered accidentally, the chance find procedure will be implemented (Annex 5) | | |
| Safety and health of workers | Workers can be injured during their work. | <ul style="list-style-type: none"> • Regional inspectors of the Ministry of Natural Resources, Ecology and Technical Supervision, who control construction works and environmental safety will be duly | | <ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PCU Technical Supervision Engineer / Technical Supervision Company will provide overall |

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| | | <p>notified of the forthcoming project works.</p> <ul style="list-style-type: none"> • All work shall be performed in a safe and disciplined manner and organized so as to eliminate work-related injury. • Personal protective equipment of workers must meet work safety standards (with mandatory permanent wearing of helmets, protective masks in those conditions where it is necessary, safety goggles, safety harnesses and safety shoes). • Appropriate directional and informational signage will be posted at the site to inform workers of the basic rules and regulations of the work to be performed. • Warning signs, signage, and signal tapes shall be installed for the safety and protection of workers. | | <p>supervision of the construction site, including monitoring of potential environmental and social risks.</p> <ol style="list-style-type: none"> 3. PCU Environmental Specialist, PCU Social Specialist and PCU Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body. |
| Public safety and health | Occupational injuries | <ul style="list-style-type: none"> • Regional inspectors of the Ministry of Natural Resources, Environment and Technical Supervision, local communities should be appropriately informed about upcoming project activities. • Local communities will be appropriately informed about the works through publications and/or media alerts and/or information | It is not considered as a separate cost item. | |

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| | | <p>boards in public places (and at work sites).</p> <ul style="list-style-type: none"> • All permits required by law for the use of waste landfill/dump, as well as approvals from the Sanitary Inspectorate, etc. during construction and rehabilitation works at the site must be obtained. • The contractors shall: <ul style="list-style-type: none"> - organize parking of machinery at a safe distance from social facilities (schools, kindergartens, hospitals, etc.); - fence the excavated trenches with warning signal tapes; - install road signs, safety signs for pedestrians and drivers, as well as mobile banners with information about the works; - provide a flagger/traffic controller during traffic closures to coordinate the flow of vehicles; - lighting of fences, temporary roads, and pedestrian zones; - provide residents with a sufficient number of safe crossing bridges with handrails (over trenches) - organize temporary pedestrian walkways to bypass excavated areas or work sites | | |
| Inflow of workers and labor issues | Conflict situations in employment. Unsatisfactory | Require contractor to: | It is not considered as a separate cost item. | |

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| | <p>living conditions. Harassment of local residents or vice versa.</p> | <ul style="list-style-type: none"> • comply with working and rest conditions; • comply with the labor schedule; • provide job skills training to increase community participation; • provide adequate sanitary facilities (toilets and washing facilities) at the workplace with sufficient supplies of hot and cold running water, soap and hand drying devices; • install a temporary septic tank system for any residential labor camp without causing pollution to nearby waterways; • provide workers who require accommodation with temporary housing under acceptable conditions for the duration of the work: • raise employees' awareness of the overall management of community relations. • Conduct regular training sessions for workers on the intolerance of any form of SEA/SH and strict compliance with the provisions of the Code of Conduct. Provide for appropriate sanctions for non-compliance with the Code of Conduct, including dismissal and imposition of fines: | | |
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| | | <ul style="list-style-type: none"> The Contractor must maintain a functioning channel for workers grievances and appeals. Grievances and appeals shall be reviewed with confidentiality regarding the complainant and the subject. The fact of the grievance and the results of its review shall be reported to the PCU. | | |
| Human Communities | Existing communications failure | Timely warning of the population about upcoming shutdowns. Quickly restore the operation of utilities. | | Local Self Governments PCU |
| | Gender quota | <ul style="list-style-type: none"> Equal participation, consideration and reflection of women's interests and opinions throughout the project implementation period. At least 30% of participants in all project meetings and hearings will be women. Under the project, communities will be invited to establish village water committees. At that, at least 30% of the committee members will be women. | | Local Self Governments PCU |
| | Poverty | A plan will be developed under the project to connect poor households to water services. | | Aiyl Okmotu (AO) Municipal water supply enterprise PCU |
| | Possible social resistance against tariff increases | Social mobilization under the project, community outreach (public works, hearings, development and implementation of information campaign plans). Tariffs will be developed taking into account | | Aiyl Okmotu (AO) Municipal Water Supply Enterprise (MWSE)/Community Drinking water Users Union (CDWUU) supported by the PCU |

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| | | community views received during public consultations. | | |
| | Limited capacity of local governments | The project includes selected activities aimed at capacity building and technical support to local governments. | | PCU |
| | Actual project implementation delays or construction delays that may pose a threat to public safety | Delays in the implementation of construction work can cause some discontent. In such cases, community outreach will be conducted. | | Contractor PCU |
| Operational Period | | | | |
| Leaks in the water supply system, water discharge during flushing of water pipes | Leaks in the water supply system and a drop in pressure can lead to poor water quality (dirty water entering the pipeline). In addition, some households may be temporarily left without water. | <ul style="list-style-type: none"> • Use of environmentally friendly fuel. • Regular maintenance (system warranty period is 12 months) • Ensuring that all warranties and certificates are obtained in accordance with fire safety requirements and monitoring of emissions/air concentrations. • Ensuring correct and efficient use of water resources and prevention of water losses, leaks and excessive water consumption - installation, operation and periodic testing of water meters at water consumers. • In case of a leak, the operating organization must shut off the water supply, determine the location and nature of the | Events, trainings and meetings | Municipal water supply enterprise PCU |

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| | | <p>accident, and then carry out repair work.</p> <ul style="list-style-type: none"> • Component 3 includes the purchase of equipment for operation and maintenance, as well as training in the operation of the system. • When flushing water pipes, water will be discharged into irrigation canals. | | |
| Source Protection (Sanitary Zone) | <ul style="list-style-type: none"> ○ Fencing the immediate area around the spring capture chamber to prevent access by livestock and unauthorized personnel. ○ Prohibiting agricultural activities, use of pesticides, or dumping of waste within a defined sanitary protective zone. ○ Ensuring proper design of the catch chamber to avoid mixing surface water with drinking water. | | | PCU |
| Using calcium hypochlorite (or calcium hypochlorite, or any other chemicals) | <p>During the construction period, work with chlorine or other chemicals is not expected, so exposure is excluded. During operation of the water supply system, exposure is possible for people working directly with chlorine or other chemicals (in the work area/chlorinator room).</p> | <ul style="list-style-type: none"> • The contractor will develop instructions for servicing the water supply system, including instructions for handling chlorine (or calcium hypochlorite, or any other chemicals). • Educational and informational work will be carried out as part of the project. | Events, trainings and meetings | Municipal water supply enterprise PCU, Department of Disease Prevention and State Sanitary and Epidemiological Surveillance |
| Wastewater management | <p>Pollution of groundwater due to the lack of effective wastewater treatment and discharge of untreated water into the area.</p> | <ul style="list-style-type: none"> • Proper control over the operation and efficiency of local treatment facilities. • Regular monitoring of the efficiency of treatment facilities. | Events, trainings and meetings | School/kindergarten administration, Department of Disease Prevention and State Sanitary and Epidemiological |

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| | | <ul style="list-style-type: none"> • Obtaining permission for water use in accordance with the requirements of the legislation of Kyrgyzstan. • Timely cleaning of the street toilet, which will be used as needed. | | |
| Possible increase in water tariffs | Currently, utility rates are below cost recovery levels and it is likely that water rates will be revised upwards once the system is operational. This could lead to public discontent. | <p>The project will build the capacity of local authorities and municipalities responsible for the provision of water services in the project areas. This will include topics and support on tariff setting, billing and collection systems, training on operations and maintenance (e.g. disinfection), water quality testing, customer management, grievance mechanisms, human resources and commercial management. The project will also support the preparation of service contracts to clarify and formalize the respective responsibilities of the operator and asset owner and support the management of service quality, tariffs and financing mechanisms.</p> <p>Institutional support at the local level will also focus on strengthening the capacity of the department at the district level, with a focus on sector monitoring and</p> | Events, trainings and meetings | Municipal Water Supply Enterprise, DDWSWD |

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| | | <p>technical support on complex operations and maintenance issues.</p> <p>The project will support the development of connection subsidy strategies and tariff setting mechanisms to meet the needs and requirements of the poorest and most vulnerable.</p> | | |
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4. Monitoring Plan

| Which parameter is to be monitored | Where to be monitored | How will be monitored (instrument type) | When (Measurement frequency) | Monitoring cost. (equipment cost or the amount of contractor costs required to implement the monitoring?) | Institutional Responsibility for monitoring | Start Date |
|------------------------------------|-------------------------------------|---|--|--|--|--|
| Noise | At construction site and waste dump | Visually | Continuous | Criteria /specifications to be incorporated into bidding and contract documents. It is not considered as a separate cost item. | <ol style="list-style-type: none"> 1. Site inspection is carried out by the PCU to ensure compliance with the ESMP. 2. The state inspectors will oversee the implementation of design solutions during construction and installation works or during the reconstruction of facilities, the quality of construction materials and structures. They will participate in the commissioning of completed construction projects. 3. The state inspectors, implementing the state environmental supervision, have the right to supervise in accordance with the established procedure after providing relevant identification documents in accordance with environmental regulations, standards, environmental protection measures during the project implementation. 4. The person responsible for the protection of the environment and social environment and occupational safety of the contractor organization on regular | After handover of the facility to the Contractor |
| Air | At construction site | Visually | On weekly basis | | | |
| Transportation | At and near the construction site | Visually | Continuous | | | |
| Waste disposal and storage | At construction site and waste dump | Visually | According to plan, but at least weekly | | | |
| Soil Pollution | At construction site | Visually | Continuous | | | |
| Construction site dismantling | At construction site | Visually | According to plan | | | |

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| Trees, shrubs | At construction site | Visually | Continuous | | base instructs workers on compliance with safety measures and registers with a specially created logbook about the completion of the instruction. | |
| Safety of workers. Briefing log, work log, availability of personal protective equipment. | At construction site | Visually | Continuous | | 5. The contractor provides workers with special protective equipment, taking into account seasonality. 6. The contracting organization provides workers with adequate housing, food, first aid kit and also creates sanitation conditions both in the camp/residence base and in the construction site by concluding contracts for the provision of the above types of services mainly with the local population, which have appropriate conditions. | |
| Working conditions and conditions of temporary accommodation for workers. Operation of the GRM for contractor employees | At the construction site" "In the workers' accommodation camp" | Visually | Continuous | | | |
| Community safety. Absence/presence of complaints related to SEA/SH. | Within the subproject area | Visually | Continuous | | | |

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| Compliance with the Code of Conduct | | | | | | |
| Absence of grounds for land acquisition (ESS5) | Within the subproject area | Visually | Continuous | | | |

5. Supervision and reporting

Supervision of the ESMP implementation measures.

During the ESMP implementation, the PCU Environmental Specialist and the PCU Social Specialist will be responsible for overall supervision to ensure that the measures specified in the ESMP are properly implemented. Specialists, in cooperation with local authorities, will monitor social and environmental activities during the construction period.

The Technical Supervision Engineer/Company shall be on the construction site at all times. In addition, the PCU Environmental Specialist, the PCU Social Specialist and the PCU Infrastructure Engineer must visit the construction site at least once a month to monitor compliance with the ESMP requirements during the subproject implementation.

Upon completion of the monitoring the PCU Environmental Specialist and the PCU Social Specialist must submit a report on the site visit to the Project Coordinator. In case of non-compliance with environmental protection measures, a report must be prepared indicating the period for the contractor to eliminate the violations.

During social and environmental monitoring, special attention will be paid to accidents and incidents. If accidents resulting in serious injury or death are identified, the Contractor or Technical Supervision Engineer must immediately notify the PCU, and they will be recorded in the subproject registry.

The accident should be classified as severe, serious or minor, with a description of the type and cause of the accident. If accidents are identified, they will be recorded in the report and categorized as severe, serious and minor with a description of the type and cause of the incident.

Regular subproject progress reports submitted to PCU by the Technical Supervision Engineer /Company on the ground must include information on the implementation of the environmental and social management plan. This section should contain concise information and brief description of monitoring activities, as well as description of problems identified and methods for their elimination.

In case of accident, the Technical Supervision Engineer /Company will immediately inform the PCU. In line with the ESCP PCU will notify the World Bank within 48 hours after receiving information about the incident or accident.

Institutional responsibility for the ESMP implementation

| № | Responsible | Duties |
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| 1 | Ministry of Natural Resources, Ecology and Technical Supervision of Kyrgyz Republic | Reviews the “Environmental Protection” section developed by the design institute as part of the design and estimate documentation for the rehabilitation of the water supply system, and issues an environmental conclusion. |
| 2 | Environmental and Technical Supervision Service under the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic | Carries out state supervision and control on environmental and technical safety issues at construction sites of subprojects |
| 3 | Department of Disease Prevention and State | It is a state supervisory body responsible for monitoring the quality of drinking water. Conducts surveys and takes |

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| | Sanitary and Epidemiological Surveillance under the Ministry of Health of the Kyrgyz Republic | samples of drinking water, examining physicochemical and microbiological indicators. Samples shall comply with the requirements of the Law of the Kyrgyz Republic Technical Regulations “On the Safety of Drinking Water”. |
| 4 | Local Self Governments | Ensure that stakeholders are informed Fulfill the terms and conditions of the Cooperation Agreement Assist in conducting public hearings. Resolving grievances during the implementation of the RAP. Pay compensation for land and assets of PAPs, as per the RAP |
| 5 | PCU Environmental Specialist | Full project environmental support. Environmental Screening. ESMP preparation. Environmental monitoring of construction works. Occupational health and safety. Training for stakeholders (contractors, LSGs, community, etc.) Issuing instructions to contractor. |
| 6 | PCU Specialist on Social Issues | Full project social support. Social screening. ESMP preparation. Social monitoring of construction works, including stakeholder engagement, community health and safety, grievance management, land acquisition, and labor influx management (including, among others, Codes of Conduct and SEA/SH) working conditions of the contractor’s employees, temporary accommodation conditions. Training for stakeholders (contractors, LSGs, community, etc.) Issuing instructions to contractor. GRM management. |
| 7 | Technical Supervision Engineer / Company | Conducts daily socio-environmental monitoring of construction works Issues instructions to contractor Conducts training and outreach to contractor Submits monthly report to PCU on fulfillment of socio-environmental requirements. |
| 8 | Contractor | Performs the ESMP activities and the Environmental Protection Section, which received a positive state environmental conclusion. Submits monthly report to PCU on the implementation of socio-environmental activities. |
| 9 | Community Drinking Water Users Union and/or municipal water utilities | Actively participate in the process of construction and/or rehabilitation of drinking water supply systems, public supervision of construction work and compliance with the requirements of the ESMP. Providing the local population with safe drinking water. Ensure sustainability of water supply systems after construction and/or rehabilitation. |

6. Public consultations

In accordance with the Stakeholder Engagement Plan prepared for this Project, one of the methods of stakeholder engagement is public consultations/hearings. As part of the project startup, the PCU will organize meetings to launch project activities in the project area. The PCU Environmental and Social Safeguards Team will organize and conduct public meetings according to the schedule of Project activities during the lifecycle of the subproject. Minutes of public meetings, hearings, and introductory meetings will be recorded, and participant sign the registration sheets and photos will be attached to confirm the activities conducted. The PCIU Public Relations Specialist is involved in the project activities to prepare and post information about the subproject on the PCU website and social media throughout the project cycle in the state and official languages. Social media channels will be used as much as possible to disseminate information, since social media usage rates are high among beneficiary users of different ages and backgrounds.

The organization and conduct of public consultations/hearings is be carried out with the active participation of stakeholders, as listed in the table below.

| Responsible site | Description of duties |
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| PCU | <p>Prepare an official letter addressed to the head of the AO about the intention to hold a public hearing on social and environmental safeguard measures during the project implementation period.</p> <p>Conducts a preliminary meeting in the subproject with the participation of the head of the AO, the management of the municipal water supply enterprise, and the chairman of the Aiyl Kenesh regarding the organization of a public hearing for the local population.</p> <p>Prepares presentation materials about the Project, social and environmental safety measures.</p> <p>Based on the results of the public hearing, makes additions or changes to the ESMP and submits it to the WB for approval.</p> |
| Aiyl Okmotu | <p>Responsible for organizing the premise for holding a public hearing.</p> <p>Informs the local population about the upcoming public hearing on the water supply project and assists in ensuring maximum community participation.</p> <p>Moderates the public hearing, keeps minutes and registers participants of the public hearing.</p> |
| Design Institute | <p>Presents the final design decision of the subproject to the participants of the public hearing.</p> |

7. Grievance Redress Mechanism

In accordance with the requirements of the World Bank's Social and Environmental Standard ESS10, the PCU will apply its Grievance Redress Mechanism (hereinafter GRM) as part of relevant component activities during the Project operation. The GRM will streamline the process of receiving, reviewing and resolving grievances that may arise as a result of the implementation of Project activities in the subproject.

The GRM process is necessary to enable direct and indirect beneficiaries, stakeholders and Project staff, at all stages of the Project implementation:

- to access information about the Project;
- at all stages of the Project operations to submit their appeals for improvement of the Project activities;
- in increasing transparency and openness in the process of implementation of the Project activities;
- timely addressing issues/problems preferably at no cost and with a guarantee of timely resolution.

Citizens' appeals directly related to the Project implementation are subject to consideration. Appeals or complaints can be either individual or collective. The mechanism will also allow for anonymous complaints to be filed and addressed. In accordance with the Law of the Kyrgyz Republic "On the Procedure for Consideration of Citizens' Appeals" dated 4 May 2007 No.67, citizens/residents of subprojects can send any appeals on issues related to the scope of the Project at all stages of its implementation. This GRM will apply to the entire Project, but will focus on the construction and/or rehabilitation component of the water supply system, as direct adverse impacts from Project activities will be experienced by residents/populations living in the Project area, and social, environmental, and other issues may arise during the design, construction, and/or rehabilitation of the drinking water supply and sanitation system.

GRM key objectives:

- Register, verify, review, follow up and respond to complaints or appeals received related to social, environmental and any other issues related to Project activities;
- To reach mutually agreed solutions satisfactory to both the Project and Project-affected persons, and to resolve any grievances locally in consultation with the aggrieved party;
- To facilitate the development process at the local level while maintaining transparency, as well as to establish accountability to project affected persons;
- Establish feedback;
- Encourage vulnerable individuals and/or groups to express their views.

7.1. Grievance Redress and Resolution Process

The mechanism for addressing /appeals of citizens affected during the Project implementation period and providing appropriate responses on social and environmental safety measures and gender issues will be implemented according to the following three levels, i.e. grievance commissions will be established.

It is important to note that the PCU will implement the approach used in the community mobilization activities through the establishment of Village Water Committee (hereinafter VWC) of village consisting of representatives of aiyl okmotu, aiyl kenesh, council of aksakals, council of women, council of youth, vulnerable category of population, ethnic minorities, Municipal Water Supply Enterprise, and interested rural residents. The main purpose of forming and interacting with the WC is to facilitate the Project to broadly involve rural residents in the process of addressing the village water supply and sanitation issues, as well as in:

- dissemination among the rural residents of reliable information on the progress of the project on construction/rehabilitation of water supply system (WS) and modernization of sanitary facilities of social institutions;

- assistance in increasing transparency and openness in the process of implementation of the Project activities;
- conducting joint monitoring of activities of aiyl okmotu and MWSE on water supply system management and provision of safe drinking water to the population.

Establishment of the Village Water Committee (VWC) of the village at the subproject level is carried out at the introductory village, where information on the Project, agreement on the composition of the VWC and the adopted Regulation on the VWC are provided, which are all together recorded in the Minutes of the general introductory village meeting. At the first meeting of the WC, a chairperson, a secretary and a person responsible for promotion of the GRM in the subproject are elected. The VWC will handle the tasks of reviewing complaints at the initial or preliminary level. Any interested party will be able to contact the VWC with a complaint or appeal, and if the party is not satisfied with the decision, they will be able to contact a higher-level Commission.

Further, the Commission for consideration of citizens of the local level is established at the level of aiyl okmotu on the basis of the Order of Aiyl Okmotu consisting of the Head of Aiyl Okmotu, who is the Chairman of the Commission, the Chairman of Aiyl Kenesh is appointed as the Co-Chairman of the Commission, representatives of the regional branch of the state institution “Cadastre”, the territorial department of the MNRETS KR, the DDPSSSES of the MH KR, Director of MWSE, the Chairman of the WC subproject, village resident and representative of the PCU in the subproject.

Regarding the Commission for consideration of citizens' appeals at the national level within the framework of the ongoing PCU DDWSWD Project, this Commission is established by the Order of the DDWSWD with No. 27/p dated 09.11.2023. The Commission is composed of:

- The Director of the Department for the Development of Drinking Water Supply and Wastewater Disposal (DDWSWD) is the Chairman of the Commission for consideration of citizens' appeals;
- The Head of the Drinking Water and Wastewater Disposal Unit of the DDWSWD is the Co-chairman of the Commission;
- Representative of the State Agency for Civil Service and Local Self-Government;
- Representative of the Department of the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic;
- Representative of the Department of Disease Prevention and state sanitary and epidemiological supervision of the Ministry of Health and Social Development of the Ministry of Health of the Kyrgyz Republic;
- PCU Director;
- PCU Environmental Specialist;
- PCU Social Safeguards Specialist

In table 2 provides information on levels, timeframe and responsible persons for consideration of appeals and complaints of citizens and stakeholders.

Table 2. Framework for managing appeals/complaints from citizens affected by the Project.

| Step | Impact level | Process | Timeframe |
|------|----------------------------|--|------------------|
| 1 | Decision at the subproject | At the initial stage, the VWC listens to the Applicant and proposes acceptable | 2-3 working days |

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| | village water committee (VWC) level. | solutions. If, the Applicant is not satisfied with the decision of the VWC, he or she shall file a complaint in writing with the local Grievance Commission. | |
| 2 | Decision at the aiyl okmotu level | Upon receipt of a written request from the Applicant, the AO Commission at the local level will analyze the request and prepare a package of documents. The decision of a majority of the Commission members shall be considered final and the final MoM shall be signed. The decision shall be made within 14 working days with sending the conclusion of the commission's decision to the Applicant. If the Applicant is not satisfied with the decision of the Commission, he/she shall submit an appeal in writing to the Central Level Commission with the opinion and supporting documents received at the local level. | 14 working days |
| 3 | Central level solution | Upon receipt of a written appeal from the Applicant, the Commission at the central level will review and prepare the appeal package. The formal hearing shall be held on a date agreed upon by the Commission members. The Commission members will contact the Applicant by telephone and organize a visit to the Applicant's community to verify an objective assessment of the facts and verify their accuracy if necessary. Within 14 working days of the filing of the appeal, the Commission will make a decision and sign the final MoM for further submission to the Applicant. | 14 working days |

At all levels, the PCU Social Safeguards Specialist will maintain direct communication with the Project Affected Person (PAP). The project will determine the validity of the grievance, notify the complainant that he/she will be provided assistance. A response will be provided within the above timeframes indicated in the matrix above, during which time meetings and discussions will be held with the affected person. In the cases when the resolution of a complaint requires a special inspection (expert examination), requesting additional materials or taking other measures, the deadlines for resolving complaints may be exceptionally extended, but for no more than 30 calendar days in accordance with the Law of the Kyrgyz Republic dated 4 May 2007 No. 67 "On the Procedure for Consideration of Citizens' Appeals". The project will support PAPs at all stages to resolve the complaint and ensure that their complaint is addressed in the best possible way.

The Project's GRM is not an obstacle to appeal to the court, in accordance with the legislation of the Kyrgyz Republic, a PAP has the right to appeal to the court at any stage of consideration of his/her grievance. Anonymous complaints will be reviewed and actions will be taken on them within the Project.

7.2 Register of appeals/complaints.

All incoming complaints or appeals are to be registered in a local and national complaints register, the information from which is duplicated in an electronic database. The database should contain, at a minimum, relevant information on the date of submission, registration number, nature of the issue, responsible person, timeframe for problem resolution and feedback (positive/negative).

The following communication channels have been established under the current PCU project through which residents/beneficiaries can send appeals at different stages of project implementation:

- WhatsApp group is an instant text messaging system for mobile devices with voice and video support to the following GRM numbers: + 996 998 544 575 и +996 707 544 575;
- oral or written communications received during on-site working meetings and by Project field specialists in the subproject;
- incoming correspondence on purpose to the PCU reception desk;
- incoming e-mail correspondence office@tunuksuu.kg
- by mail - Bishkek, Baytik Baatyr str. 34.
- by phone: + 996 (312) 54-54-55

7.3. Handling sensitive grievances

Given the Standards for the Prevention of Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), which the World Bank requires all WB-financed projects to adhere to, these standards and responsibilities are also to be adhered to, whereby measures are taken to raise awareness on prevention and mitigation of SEA/SH. At all stages of project implementation, all the PCU staff and contractors will be informed on understanding the principles of control and prevention of the SEA/SH risks. The GRM will ensure access and confidentiality of the grievance mechanism, and will ensure that the applicant does not fear likely retaliation. These complaints will be investigated without any delay and all responsible will be held accountable. The SEA/SH issues will require certain additional measures:

- Gender sensitivity will be taken into account in the hiring of social work specialists to work in the PCU.
- Safeguards specialists will be informed of the SEA/SH issues.
- In addition to sociocultural sensitivity and non-violent communication in employee training, the SEA/SH will be on the agenda as well. Training for employees will include the following information about the SEA/SH:
 - ✓ Definition of violence against women in national and international instruments;
 - ✓ Types of violence (physical, sexual, economic, emotional);
 - ✓ Legal Sanctions.
- The grievance mechanism will be accessible and will ensure the confidentiality of personal information.

- Awareness-raising activities will be conducted to inform women about the application of the mechanism. The following types of information will be provided in these activities:
 - ✓ Women's rights;
 - ✓ Self-defense in cases of violence and sexual assault. Emergency phone numbers;
 - ✓ Contact information of institutions and organizations to which they can apply;
 - ✓ Grievance mechanism and privacy policy.
- The principle of confidentiality of the grievance mechanism will be repeated in all information materials.

The Project will use additional mitigation measures proportional to the risk. The Contracting organization will be responsible for developing personnel management procedures, health and safety plans, and the SEA/SH protocols that will apply to its own employees and employees of (sub)contractors who are employed by the Project. These procedures and plans will be submitted to the PCU for review and approval before contractors are allowed to begin construction work. All contractors will be required by contract to commit against the use of child labor and forced labor, to take measures regarding the effects of the SEA/SH, and PCU personnel responsible for contractor oversight will monitor and report on the absence of forced labor and incidents of the SEA/SH. All personal data and complaints received by GRM will be treated confidentially unless the Applicant consents to the disclosure of their personal information. In particular, the confidentiality of sensitive issues and the SEA/SH complaints from communities will be respected.

7.4. WB Grievance Redress Service

Communities and individuals who believe that they are adversely affected by a World Bank-supported Project may also file complaints directly with the Bank through the Bank's Grievance Redress Service (GRS) (<http://projects-beta.worldbank.org/en/projectshttp://projects-beta.worldbank.org/en/projects-operations/products-and-services/grievance-redress-serviceoperations/products-and-services/grievance-redress-service>). A complaint may be submitted in English, Kyrgyz or Russian, although complaints written in languages other than English will require additional time. You can file a complaint with the Bank's GRS through the following channels:

- by e-mail: grievances@worldbank.org
- by fax: +1.202.614.7313
- by mail: The World Bank, Grievance Redress Service, MSN MC10-1018, 1818 H Street Northwest, Washington, DC 20433, USA
- To the World Bank Office in the Kyrgyz Republic, Bishkek, J. Abdrahmanov Str. 191, Bishkek, Kyrgyz Republic, bishkek@worldbank.org, and by phone: +996 312 625262

The complaint should clearly state the adverse impact allegedly caused or likely to be caused by the Bank-supported project. It should, where possible, be supported by available documentation and correspondence. The applicant may also indicate the desired outcome of the complaint. The complaint must include the name of the applicant or designated representatives and contact information. Grievances filed through the GRS shall be addressed as soon as possible so that Project-related issues can be quickly resolved.

Annex 1. Environmental Screening

Part 1. (to be filled in by the subproject beneficiary)

1. **Project Name:** Altyn-Beshik

2. Summary Subproject Description

The water supply system is gravity-fed and pressurized. The water supply system is combined for domestic and drinking water and firefighting. The project is intended for Kaiyndy village and Kan and Sary-Talaa villages:

1. Descending type intake structure, individual design
2. Water pipeline - 1
3. Steel round reservoir with a capacity of 200 m³ – 2 pcs.
4. Chlorinator room
5. Watchhouse - 1 pc.
6. Toilet for 1 point - 1 pc.
7. Water supply network.

3. Will the project affect the following environmental parameters during construction or operation? Indicate by checking at what stage the impact will occur and whether mitigation measures are required.

| Environmental component | Construction stage | Operational stage | Mitigation measures |
|--|--------------------|-------------------|--|
| Soil | | | |
| Land and soil degradation: will there be excavation work in the project? | Yes | No | <ul style="list-style-type: none"> • Ensure proper selection of areas for construction site location, where solid waste collection and safe toilets (possibly composting toilets) should be provided. • Timely cleaning of territories from fuel oil in case of oil spills on the soil • Washing of machinery and equipment on the construction site is prohibited. • Fueling of machinery will be carried out at specialized fuel stations. • Vehicles with bad fuel systems exceeding emission standards and hydraulic systems are not permitted. • Use of vehicles that have passed technical inspection. • Storage and warehousing of fuels, lubricants and construction materials is not allowed to prevent pollution from entering the river. • Daily checks of machinery and equipment for oil leaks. |
| Soil and groundwater pollution | Yes | No | |

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| | | | <ul style="list-style-type: none"> • Topsoil removal. Improvement of the territory in accordance with the project. |
| Generation of solid waste, including toxic waste? | Yes | No | <ul style="list-style-type: none"> • Before the start of works, to sign an agreement with the local municipality for disposal of construction and household waste at the municipal landfill. • Determine waste collection and disposal methods before work begins, as well as storage locations for the main types of waste generated during demolition and construction work. • Mineral construction waste and waste generated during dismantling of objects must be separated from organic, liquid and chemical waste at the work site, after which they are stored at the appropriate site. • All records and documentation of waste removal and disposal must be properly maintained as evidence of good waste management practices at the site as intended. • Recycling of waste inert materials (except asbestos) is permitted where possible. • Construction waste is transported at the contractor's expense to storage sites. <p>Asbestos Containing Materials</p> <ul style="list-style-type: none"> • Some construction debris may contain asbestos. The Contractor must train its employees to assess the presence of asbestos-containing materials and determine procedures for the safe disposal of asbestos using appropriate protective equipment and storage in sealed containers. Safety requirements for asbestos management are specified in Annex 4. • Work with and disposal of asbestos must be carried out by qualified and experienced specialists using appropriate protection (masks, gloves and overalls). |

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| | | | <ul style="list-style-type: none"> • Before removal (if removal is necessary), the asbestos is treated with a wetting agent to minimize the generation of asbestos dust. • Asbestos-containing materials must not be crushed or cut. • Workers should avoid crushing/destruction of asbestos waste and dispose of it in an organized manner at construction sites, followed by removal to designated areas or disposal. • If asbestos material is to be temporarily stored, its waste must be securely isolated in closed containers and labeled as hazardous material. • Hazardous waste transportation to landfills is carried out by specially equipped own transport of the enterprise or specialized transport companies. • Transportation of unpackaged asbestos in open bodies of vehicles is not permitted. • ACM should be safely disposed of at a local hazardous waste landfill, if available, or at a municipal landfill after prior arrangement with the landfill operator for safe storage. |
| Activities with positive or negative impacts on ecosystem services or biodiversity | Yes | No | <p>The cutting down of trees and shrubs and pruning of crowns should be carried out strictly along the routes for laying pipes only after obtaining permits from territorial environmental authorities in agreement with local authorities, taking into account compensatory plantings.</p> <p>If it is necessary to cut down municipal trees, the contracting organization should request a cutting permit from Aiyl Okmotu. Then, AO with the approval of the local environmental authorities will obtain a permit to cut down the specified number of trees.</p> <p>Once the water pipeline route is completed, the municipality must conduct a tree inventory to</p> |

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| | | | <p>identify potential trees that will be cut down as compensation.</p> <p>In case of felling of municipal trees will be provided compensation in the form of seedlings (the amount of compensation is indicated in the bill of quantities (BoQ)). For one tree cut down, 3 will be planted.</p> <p>The contractor plants seedlings in places determined by aiyl okmotu (AO), drawing up act of planting.</p> <p>In the case of private tree felling, a RAP will be prepared in accordance with ESS 5. If trees of several owners are cut down, one RAP may be prepared for the subproject.</p> |
| Air Quality | | | |
| Does the project involve emissions of pollutants? | Yes | No | <ul style="list-style-type: none"> • Dust control measures and related household activities such as spraying water to prevent dust, using curtains and barriers at the construction site. • Use of masks, gloves and protective clothing. • Limit vehicle speeds and select appropriate transport routes to minimize exposure to dust-sensitive receptors. • Equip vehicles carrying bulk materials with removable awnings. Cement is delivered to construction sites only in packaged, hermetically sealed bags. • The above equipment is ordered only for the period of specific work and is not permanently located on the construction site. • Vehicles with bad fuel systems exceeding emission standards are not permitted. • It is prohibited to burn construction and household waste at the work site. • Keep the surrounding area clean and free of construction debris to minimize dust and contamination. Organization of proper storage and transportation of flammable and hazardous materials (gas |

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| | | | cylinders, bituminous materials, paints, solvents, glass and rockwool). It should be noted that the construction of facilities will not take place in parallel, but in stages and sequentially, from one facility to another. |
| Aquatic Environment | | | |
| Quantity of water: will the project include water use? | Yes | No | <ul style="list-style-type: none"> • Avoid spills/leaks of fuel oil into the ground; in case of unintentional spills, remove contaminated soil and transport it to appropriate places. • Timely cleaning of areas from fuel oil in order to prevent their entry into local water courses and groundwater together with atmospheric precipitation. • Vehicles with bad fuel systems exceeding emission standards and hydraulic systems are not permitted. • Cleaning the outdoor toilet pit from liquid waste and its removal to municipal wastewater treatment plants according to the Disposal Law. • Excavations near groundwater sources are prohibited. • Work areas with equipment, concrete mixers and fuel tanks should be located outside the water protection zones. • Installation of special pallets and other prefabricated equipment in places of possible leaks and spills of fuel and lubricants, technical solutions. <p>Disinfection of pit toilet and filling with soil in accordance with SNIps.</p> |
| Water Quality/Pollution: Will the project contribute to surface water pollution? | Yes | No | |
| Socio-Economic Environment | | | |
| Will the project ensure the absence of deterioration in human health, labor safety and unhindered living of residents near the project area, including traffic and road safety? | Yes | Yes | <ul style="list-style-type: none"> • Compliance with approved occupational health and safety instructions. • All work must be carried out using safe practices and procedures to minimize negative impacts on the public and the environment. • Personal protective equipment must comply with safety standards |

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| | | | <p>(mandatory use of protective helmets, masks, if necessary, belts and shoes).</p> <ul style="list-style-type: none"> • The contractor is obliged to provide workers with: <ul style="list-style-type: none"> - drinking water during working hours; - portable toilets when a crew of more than 8 people is working; - medical kits for each construction site for first aid - anti-noise headphones, earplugs • Compliance with all fire safety requirements <p>The sites will be equipped with appropriate information boards and signs notifying workers about labor rules and regulations.</p> |
| Does the project require public consultation to address environmental issues and suggestions from local residents? | Yes | No | <p>The proposed social and environmental risks and impacts, as well as mitigation measures, will be presented at public consultations/hearings. Suggestions from local residents and public organizations will be taken into account in the finalization of this ESMP.</p> |
| Social Implications | Yes | Yes | <ul style="list-style-type: none"> • Local communities will be appropriately informed about the works through publications and/or media alerts and/or information stands in public places (and at workplaces). • All permits required by law for the use of landfill/waste dump, as well as permits from the Sanitary Inspectorate, etc. during construction and restoration work at the site must be obtained. • The Contractor is obliged to: <ul style="list-style-type: none"> - organize parking of machinery at a safe distance from social facilities (schools, kindergartens, hospitals, etc.); - fence off the opened trenches with warning tapes; - install road signs, safety signs for pedestrians and drivers; - provide residents with a sufficient number of safe bridges crossings (across trenches). |

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| Actions that may affect cultural heritage | No | No | |
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Part 2. (to be completed by the PCU based on the results of the environmental impact assessment)

1. Environmental category of the subproject (High (H), Significant (S), Moderate (M) or Low (L)) **Moderate (M)** (if the project is classified as H, the following items do not need to be filled in - the subproject cannot be included in the project)

2. Will the project activities be implemented?

a) in or near sensitive and valuable ecosystems - wetlands, wildlife and endangered species habitats - **NO** (yes or no)

b) in areas with archaeological and/or historical monuments or active cultural and social institutions or near them - **NO** (yes or no)

c) in regions prone to intensive development or where there are conflicts in the distribution of natural resources; along watercourses, in aquifer recharge zones or water bodies used for drinking water supply; and on lands or waters containing valuable resources (such as fisheries, minerals, medicinal plants, basic agricultural soils) - **NO** (yes or no)

If “yes”, the subproject will be excluded from the Program.

3. Environmental assessment required (yes or no) **YES** (the following items should be filled in only for significant, moderate subprojects)

4. Types of required EIA documents (please circle):

a) Partial ESIA, including site assessment and Environmental and Social Management Plan (ESMP) for subprojects with significant risk;

b) **Environmental and Social Management Plan for subprojects with moderate risk;**

c) ESMP checklists for low-risk subprojects;

d) **Draft Environmental Impact Report (for Kyrgyz subprojects categories 2-4)**

e) Environmental Impact Report (only for Kyrgyz subprojects of category 2-3)

5. What environmental and social issues are raised in the subproject?

It is expected that these works may cause a variety of minor to moderate local impacts, which may include:

- increased pollution from construction waste;
- generation of dust, noise and vibration during the operation of construction machinery and mechanisms;
- associated risks due to improper disposal of construction waste and asbestos-containing materials that can be found in old water pipes;
- operational or emergency spills of fuel and lubricants from construction machinery and equipment;
- inadequate restoration of construction sites after completion of work;
- increased road traffic/transport traffic, as well as health, safety and public safety issues;
- potential temporary local disturbance of biodiversity and living natural resources.

Conclusion (can the subproject be included in the program and if so, under what conditions): the subproject can be implemented provided that all social and environmental mitigation measures are included in the project.10. If an environmental and social impact assessment is required, what specific issues need to be addressed?

Part 3. Final Environmental Impact Assessment Checklist (to be filled in by the PCU based on the review of proposed mitigation measures and environmental impact assessment (if necessary))

Has an Environmental and Social Management Plan been prepared? (Yes or no) **YES** If yes, was this done?

The assessment was carried out within the framework of the “Environmental Protection” section, which received a positive conclusion of the state environmental expertise.

Has an Environmental and Social Management Plan been prepared? (Yes or no) **YES**

Are the mitigation measures to be included in project implementation adequate and appropriate? (Yes or no) **YES**

Will the project meet existing emission and waste control standards? (Yes or No) **YES** If no, is an exception necessary? _____

Do you need an environmental monitoring plan? (Yes or No) **YES** If yes, was it prepared? (Yes or no) **YES**

Have public consultations been held on the potential environmental impacts of the proposed subproject? (Yes or no) **YES** Were the MOM made? (Yes or no) **YES**

Date:

Participants

Part 4. Final Environmental Assessment Checklist (2)

(to be filled in by the PCU based on a review of proposed mitigation measures and an environmental and social impact assessment (if necessary))

Is the design documentation ready? If not, what is missing? *DED is ready*

Are permits required for the use of land and resources? If so, were they obtained? *Yes, the solid waste disposal permit is required. Permits will be obtained after the contractor has been selected.*

Do solid waste permits need to be obtained? If so, were they obtained? *Yes, will be obtained after the contract with the contractor is awarded*

Are waste water discharge permits required? If so, were they obtained? *Yes, will be obtained after the contract with the contractor is awarded*

Is sanitary inspection required? Is the permit issued? *Yes*

Is an environmental assessment obtained and approved? *Yes*

Is there any potential for soil degradation or contamination? If yes, were appropriate avoidance or mitigation measures planned and envisaged? *Yes, measures are envisaged*

Is there a potential for water quality deterioration or contamination? If yes, were appropriate avoidance or mitigation measures planned and envisaged? *Yes, measures are envisaged*

Is there a potential for air quality deterioration or pollution? *Yes, measures are envisaged*

If yes, were appropriate avoidance or mitigation measures planned and envisaged? *Yes, measures are envisaged*

Is there a threat to the biological environment? If yes, were appropriate avoidance or mitigation measures planned and envisaged? Is there any potential for adverse social impact? *Yes, measures are envisaged*

If yes, are the necessary preventative, mitigating or compensatory measures planned and envisaged? *Yes, measures are envisaged*

Was the level of public participation in design, planning and public consultation sufficient? Was public opinion raised during the consultation process? *Yes*

What is the desirable level, frequency and extent of environmental monitoring during the construction stage? *At least once a month*

What is the desirable level, frequency and extent of environmental monitoring during the operational stage? *Semi-annual*

Annex 2. Social Screening

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| Project Name: | CRWSP |
| Subproject Name: | Altyn-Beshik |
| Location (region, city, village) | Batken region, Batken district, Altyn-Beshik aiyl aimak, Kaiyndy, Kan, Sary-Talaa villages |
| <p>Subproject Description: Kaiyndy, Kan and Sary-Talaa villages administratively belongs to Altyn-Beshik aiyl aimak. Kaiyndy village is located 80 km from the regional center of Batken town, the distance from the water intake site (Dary-Suu) to the center of Altyn-Beshik aiyl okmotu is 90 km. Kan and Sary-Talaa villages are located 65 km from the regional center of Batken town. The population of Kaiyndy village is 1089 people living in 274 households, with a total area of 1900 square kilometers. Kan village has a population of 677 people living in 158 households, with a total area of 743.92 square kilometers. Sary-Talaa village has a population of 584 people living in 142 households, with a total area of 553.5 square kilometers. The population is 100% Kyrgyz. The main population activities are livestock, agriculture, and small business. Women, who make up half of the village population, are mainly engaged in housekeeping.</p> <ul style="list-style-type: none"> • Average annual outdoor temperature: 9,3⁰C; • Absolute minimum air temperature: - 28⁰C; • Absolute maximum air temperature: 37⁰C; • Calculated temperature of the coldest 5 days: - 13⁰C; • Average temperature of the coldest period (ventilation): -7⁰C; <p>According to the passport of Altyn-Beshik aiyl okmotu, the following municipal social facilities are located in the aimak area:</p> <ul style="list-style-type: none"> • general educational institutions - 10; • preschool institutions - 8; • hospitals - 1; • rural health post - 9; • family medicine groups - 2; • emergency room - 1; • community centers - 6; • libraries - 7; • museum - 1; • sports halls - 7; • sports grounds - 4; | |
| <p>Summarized information about the subproject and its components, its objectives and benefits: The Altyn-Beshik subproject will implement a number of activities related to the following components of the Project:</p> <p>Under Component 1 - Investments in Infrastructure and Improved Service Delivery, activities are foreseen for the construction of a water supply system (WS), including assessments of the technical condition of the existing WS and based on the results of the development of design and estimate documentation (DED). The construction and installation work of the water supply system will be started after approval of the Altyn-Beshik subproject DED.</p> <p>The source of water supply for Kaiyndy village is underground spring water, descending type intake structure. The Suu-Bashy water intake site is located in the Suu-Bashy gorge. The flow rate of the Suu-Bashy Spring was 14-15 l/s. The source of water supply for Kan and Sary-Talaa villages is underground spring water, descending type intake structure. The Ak-</p> | |

Moinok water intake site is located in the Ak-Moinok gorge. The flow rate of the Ak-Moinok spring was 15 l/s.

Water intake by descending springs is provided in the form of special chambers equipped with water intake openings and water-collecting walls, along which a prism of filtering materials is laid on the side of the underground water flow, connected to the reverse filter of the intake chamber. Intake chambers are constructed from prefabricated reinforced concrete d1500mm. The collected water from the receiving chamber is fed by gravity through water pipe No. 1 to round steel reservoirs with a capacity of 200 m³ each, to the reservoir site located 2100 meters from the northern side of Kaiyndy village in the highest area of the village's relief and to the reservoir site located in the northern part of Kan village in the highest area of the village's relief.

Prior to delivery to villages, water is decontaminated using chlorinator. From the reservoirs, water flows through water pipes into the village's distribution network.

The network is equipped with water wells with all the necessary pipe fittings, fire hydrants, and water meters. For water distribution, each well is equipped with two types of distribution nodes: threaded and welded.

Fire hydrants are installed on the water supply line to ensure external firefighting. Water consumption for firefighting is not included in the estimated daily water consumption. This consumption is provided in the form of a reserve in clean water reservoirs for a total of three hours of firefighting. The water supply network is verified by calculating the flow rate for firefighting, which coincides with the hour of maximum water consumption for domestic and drinking needs.

To indicate the location of a fire hydrant, signs are placed on the walls of the nearest houses in accordance with GOST 12.4.009-75 "Firefighting equipment for the protection of facilities. General requirements." The signs are made and placed in agreement with the local fire authority by the population and economic organizations that use the water supply system.

In accordance with the requirements of the regulations, sources of drinking water supply should have sanitary protection zones (SPZ) in order to ensure their sanitary and epidemiological reliability. The SPZ should include the territory of the water supply source in the place of water intake and comprise three sub-areas: the first - exclusion area; the second and third -constraints area. The project will provide water supply networks to ensure 100% coverage of residential and communal buildings with centralized water supply systems with simultaneous replacement of old networks that have exhausted their depreciation resource and networks with insufficient capacity.

Under Component 2 - Institutional Strengthening of Climate Resilient Service Delivery and Water Resources Management, the Project will implement the following activities:

- information, introductory workshops and community meetings;
- connecting households and social institutions to the WS system;
- support in the institutional development of the WS enterprises and the establishment of new enterprises (in the absence of such enterprises), including the development of foundation and organizational documents, office management, HRM, etc;
- support of local governments and the WS enterprises in their work with the population and consumers;
- improvement of technical, operational activities of the WS enterprises;
- assistance in tariff development and public consultations on tariffs;
- development/updating of training modules, including subjects in the area of wastewater, wastewater treatment and sanitation management;

| <ul style="list-style-type: none"> • trainings and exchange visits (including on-the-job trainings with the involvement of narrow specialists); • organization of short-term professional development courses, certified training on the basis of profile universities, secondary and primary vocational educational institutions in the field; • consulting and information support; • rehabilitation and/or construction of sanitary units and technical facilities of pilot social institutions. | | | | |
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| <p>Does the subproject include construction works, including construction of new facilities, expansion, modernization or (re)construction of existing drinking water supply and sanitation facilities?</p> <p>100% replacement of distribution networks Construction of a new reservoir Rehabilitation of water intake</p> <ol style="list-style-type: none"> 1. Descending type intake structures, individual design. 2. Second lift pumping stations. 3. Reservoirs with a capacity of 200 m³ – 2 pcs. 4. Water pipeline. 5. Water supply networks. | | | | |
| <p>Is this subproject related to any other activity not financed under the Project?</p> <p>Not.</p> | | | | |
| <p>Will this subproject include any additional impacts/activity outside of the work site?</p> <p>Not.</p> | | | | |
| Questions | Yes | No | Unknown | Observations, comments |
| Impact due to acquisition/donation of land | | | | |
| Is the land area required for the project known? (Indicate estimates in notes, including ownership status, area, land use type, etc.) | + | | | Land plot allocated for the construction of the water supply system: the networks will be located on municipal property with an area of 11,075 m ² , the reservoir will be located on municipal property with an area of 0.30 ha, and the water intake will be located on municipal property with an area of 0.30 ha. |
| Is the ownership status and current use of the land to be used for construction known? (details in the comments). Please clarify whether the site selected for this work is free of encumbrances and is owned by the subproject executor? | + | | | Title deed: Resolution No. 02-06/43 of the Altyn-Beshik Aiyl Okmotu dated March 25, 2025, confirming the right to use land for the WS construction. |

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| | | | | Certificates of right to perpetual use of land No. B063070, No. B063069. |
| Is there any estimate of the land area owned/actually used by individuals/legal entities that is subject to land acquisition? | + | | | According to DED, the WS construction is planned only on municipal land. |
| Is there any estimate of the likely number of persons/organizations that will be displaced as a result of the Project? | + | | | According to DED and under the project no displacement of people and organizations is expected. |
| Is land available for mobilization of materials or transportation for construction works on the existing site (right-of-way/bypass road)? If not, provide details of the location of this land plot, availability, etc. | + | | | After signing the contract for the construction of the WS, Aiyl Okmotu will allocate plots for the base and warehouses of contractors. |
| Will the project potentially include temporary or permanent and full or partial physical relocation? (Specify in the notes what type of displacement is assumed). | | | | According to the RPF and Assessment, no displacement issues are expected. |
| Will the Project potentially involve temporary or permanent and full or partial economic displacement (e.g., loss of assets or access to resources due to land acquisition/gift or access restrictions - even in the absence of physical resettlement)? (Specify in the notes what type of displacement is assumed). | | - | | No |
| Is there any impact on illegal land use practices? Are there any people without legal title who live/have businesses on the proposed project areas/sites that will be used for construction work? If yes, provide details of temporary or permanent impact on them in the "Notes" section? | | - | | No |
| If the site is in private ownership, can this land be acquired through negotiation? | | - | | The land for the WS CIW is municipal property. |

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| Will the landowners provide land for the project? | | - | | No |
| Will there be a loss of housing and/or residential land due to land acquisition/donation? | | - | | No |
| Will there be a loss of any productive assets due to land acquisition/donation? | | - | | No |
| Will there be loss of crops, trees and fixed assets due to land acquisition/donation? | | - | | No |
| Will there be a loss of business or enterprises due to the acquisition/donation of land? | | - | | No |
| Will there be loss of income sources and livelihoods due to land acquisition/ donation under the subproject? | | - | | No |
| Will any social or economic activities be affected by land use-related changes? | | - | | No |
| Will people lose access to natural resources, communal facilities, services or other assets as a result of land acquisition/donation or project implementation? Provide details in the comments. | | - | | No |
| Would the project result in land use restrictions and/or servitude rights? Provide details in the comments. | | - | | No |
| Will access to public or government owned land and resources be restricted? | | - | | No |
| Is there a territorial dispute between two or more countries over the subproject area, its subsidiary aspects and related activities? | | - | | No |
| Have there been any previous land acquisitions and the identified land has already been acquired? Provide details in the "Note" section. | | - | | No |
| Is land acquisition taking place under this project but without World Bank financing? Provide details in the "Note" section. | | - | | No |
| Data on vulnerable groups | | | | |
| Is there any estimate of the likely number of vulnerable groups/individuals that will be displaced as a result of the Project? | | - | | Vulnerable categories of groups/individuals are not expected to be displaced under this subproject. |

| | | | | |
|---|--|---|--|---|
| Are there poor women heads of households or vulnerable to the risk of poverty? Provide some evaluation. | | - | | No |
| Whether the subproject is located in any vulnerable/sensitive areas, social facilities such as a residential area or school, or near them as well as the availability of municipal services (irrigation, drinking water, sewerage and waste collection services)? | | - | | No |
| Is the subproject located in or near any known cultural heritage sites? | | - | | No |
| Gender | | | | |
| Is there likely to be an impact on gender equality and/or the situation of women and girls? | | - | | No |
| Will the Project potentially reproduce gender discrimination against women, especially with regard to access to assets, opportunities and benefits? | | - | | No |
| Whether the Project will potentially limit women's ability to use, develop and protect natural resources, taking into account the different roles and positions of women and men in accessing environmental goods and services? | | - | | No |
| Gender-based violence and sexual harassment | | | | |
| Does the project site pose a significant risk of gender-based violence (GBV) and sexual exploitation and abuse (SEA)? | | | | The project takes into account measures to manage gender-based violence through inclusion of the Code of Conduct section in the contracts of contracting organizations. In addition, training and briefings on gender-based violence will be provided by the Project's Safeguards officers. |
| Is recruitment of foreign manpower expected for the subproject, which may result in manpower influx? | | | | The winner will be known at the end of the contest. If the winner is a foreign company or a local company that will hire foreign manpower, |

| | | | | |
|--|--|--|--|---|
| | | | | the PCU staff will conduct explanatory work on the Code of Conduct for all employees, including foreigners. |
| GRM | | | | |
| Does the subproject have a grievance mechanism, including at the central level, to which all employees have access and which is designed to respond quickly and effectively? | | | | The mechanism for addressing /appeals of citizens affected during the Project implementation period and providing appropriate responses on social and environmental safety measures and gender issues will be implemented according to the following three levels, i.e. grievance commissions will be established at all levels: <ul style="list-style-type: none"> • at the subproject level; • at the local level (AO); • at the central level (DDWSWD). |
| Decision on categorization. After review of the above answers, the subproject category is determined as <i>Moderate</i> . | | | | |

Annex 3. Code of Conduct

CODE OF CONDUCT TO BE OBSERVED BY THE CONTRACTING ORGANIZATION (HEREINAFTER REFFERED TO AS THE CONTRACTOR)

Code of Conduct for Contractor Personnel: Form

We, the contractor, [*enter Contractor's name*], have signed a contract with [*enter Employer's name*] for [*enter description of Work*]. These Works will be carried out at [*insert Site and other locations where the Works will be carried out*]. Our contract requires us to take measures to address the environmental and social risks associated with the Works, including the risks of sexual exploitation, sexual violence and sexual harassment.

Note:

The minimum content of the Code of Conduct form established by the Employer shall not be materially altered. However, the Contractor may add requirements as necessary, including to address issues/risks associated with the Contract.

This Code of Conduct is part of our measures to address the environmental and social risks associated with our operations. It applies to all of our personnel, employees and others employed on the construction site or elsewhere where work is being performed. It also applies to the employees of each subcontractor and any other personnel assisting us in the performance of the Work. All such persons shall be referred to as “**Contractor Personnel**” and shall be bound by this Code of Conduct.

This Code of Conduct defines the behavior we require of all Contractor Personnel.

Our workplace is an environment where unsafe, abusive, angry or violent behavior is unacceptable and where all people should feel comfortable raising issues and not fearing punishment.

REQUIRED BEHAVIOR

The Contractor's personnel shall:

1. Perform their duties with integrity and competence;
2. Comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and welfare of other Contractor Personnel and any other person;
3. Maintain a safe working environment, including by:
 - ensuring that workplaces, machinery, equipment and processes under everyone's control are safe and free from health hazards;
 - wearing the necessary personal protective equipment;
 - using appropriate measures for chemical, physical and biological substances and reagents; and
 - following applicable emergency operating procedures.
4. Report work situations that he/she believes are unsafe or pose a health hazard, and to withdraw himself/herself from work that he/she reasonably believes poses an immediate and serious danger to his/her life or health;
5. treat others with respect and do not discriminate against certain groups such as women, people with disabilities, migrant workers or children; not engage in sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other Contractor or Employer personnel;

5. Report work situations that he/she believes are unsafe or pose a health hazard, and to withdraw himself/herself from work that he/she reasonably believes poses an immediate and serious danger to his/her life or health;
6. Treat others with respect and do not discriminate against certain groups such as women, people with disabilities, migrant workers or children;
7. Not engage in sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other Contractor or Employer personnel;
8. Not to engage in sexual exploitation, which means any actual or attempted abuse or misuse of a position of vulnerability, inequality of position or trust for sexual purposes, including but not limited to obtaining monetary, social or political advantage from the sexual exploitation of another person;
9. Not to participate in forced sexual activity, which means actual coercion or coercion of a sexual nature by physical force, under unequal or coercive conditions;
10. Not engage in any form of sexual activity with anyone under the age of 18, unless previously married;
11. Attend appropriate training courses to be conducted on the environmental and social aspects of the Contract and to include health and safety, sexual exploitation and abuse and sexual harassment;
12. Report violations of this Code of Conduct; and
13. Not retaliate against any person who reports violations of this Code of Conduct, whether to us or to an employer, or who utilizes the grievance mechanism provided for contractor personnel or the project grievance mechanism.

RAISING CONCERNS

If any person witness's behavior that he/she believes may constitute a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the matter immediately. This can be done in one of the following ways:

1. Contact [*enter the name of the PCU Social Specialist with relevant experience in handling cases of sexual exploitation, sexual abuse and sexual harassment, or, if such a person is not required by the Contract, another person designated by the Employer to handle these matters*] in writing at the following address [] or by telephone [] or in person at []; or
2. Call [] to the Employer's hotline (*if available*) and leave a message

A person's identity will be kept confidential unless suspected involvement is provided for under the laws of the country.

Anonymous complaints or claims may also be made and will be given due and appropriate attention. We take all reports of possible misconduct seriously and will investigate and take appropriate action. We will provide guidance and additional information to service providers who can help support the person experiencing the alleged incident, as appropriate.

No penalty will be imposed against any person who in good faith reports any conduct prohibited by this Code of Conduct. Such punishment will be a violation of this Code of Conduct.

CONSEQUENCES OF VIOLATING THE CODE OF CONDUCT

Any violation of this Code of Conduct by Contractor Personnel may result in serious consequences, up to and including termination of employment and possible referral to law enforcement authorities.

FOR THE CONTRACTOR'S PERSONNEL:

I have received a copy of this Code of Conduct written in a language I understand. I understand that if I have any questions about this Code of Conduct, I may contact [*enter the name of the Customer's contact person(s) with relevant experience*] to request clarification.

Name of Contractor's employee: [*insert full name*]

Signature _____

Date: (day/month/year): _____

Counter-signature of the Contractor's authorized representative:

Signature _____

Date: (day/month/year): _____

Behaviors that constitute sexual exploitation and abuse (SEA) and behaviors that constitute sexual harassment (SH).

BEHAVIOR THAT CONSTITUTES SEXUAL EXPLOITATION AND ABUSE AND BEHAVIOR THAT CONSTITUTES SEXUAL HARASSMENT

The following is a partial list of prohibited behaviors.

(1) **Examples of sexual exploitation and abuse** include, but are not limited to, the following:

- Contractor personnel inform a local resident that he/she can obtain work related jobs (e.g., cooking and cleaning) in exchange for sexual favors.
- Contractor personnel who connect households to the electricity grid say they can connect female-headed households to the grid in exchange for sexual favors.
- Contractor personnel raping or otherwise subjecting a local resident to violent sexual acts.
- Contractor personnel will deny a person access to a construction site if they are not providing a sexual service.
- Contractor personnel inform the person applying for work under the Contract that he/she will only hire him/her if he/she has sex with him/her.

(2) **Examples of sexual harassment in the work context**

- Contractor Personnel make comments about other Contractor Personnel's appearance (positively or negatively) and sexual attractiveness.
- When Contractor Personnel complain about another Contractor Personnel's comments about his/her appearance, the other Contractor Personnel responds by saying that he/she is "provoking him/her to do so" because of the way he/she dresses.
- Unwanted touching of Contractor or Employer Personnel by other Contractor Personnel.

The Contractor's Personnel informs the other Contractor's Personnel that he/she will receive a pay raise or promotion if he/she sends him/her nude photos of himself/herself.

Annex 4. Asbestos Containing Materials Management Plan (example)

Applicability

The Asbestos Containing Materials Management Plan (ACMMP) applies to all construction or reconstruction sites and any related areas. Contractors employed by Project are legally responsible for their construction sites and related areas and must follow the provisions of the Project ACMMP within those locations. Specifically, this procedure must be used to ensure the safe handling, removal and disposal of any and all Asbestos Containing Materials (ACM) from those areas.

Immediate action

On discovering ACM on a Project site, the contractor must:

- Stop all work within a 5 m radius of the ACM and evacuate all personnel from this area;
- Delimit the 5 m radius with secure fencing posts, warning tape and easily visible signs warning of the presence of asbestos;
- If the site is in an inhabited area, place a security guard at the edge of the site with instructions to keep the general public away;
- Notify the PCU Safeguards Specialist and arrange an immediate site inspection.

Equipment

To remove asbestos from a construction site, contractors must provide the following equipment:

- Warning tape, sturdy fence posts and warning notices;
- Shovels;
- Water supply and hose fitted with a garden type spray attachment;
- Buckets of water and rags;
- Sacks of clear, strong polythene that can be tied to close;
- Asbestos waste containers (empty, clean, sealable metal drums, clearly labelled as containing asbestos).

Personal Protective Equipment (PPE)

All personnel involved in handling ACM must wear the following equipment, provided by the contractor:

- Disposable overalls with a hood;
- Boots without laces;
- New, strong rubber gloves;
- A respirator is not normally required if there are only a few pieces of ACM in a small area, and if the ACM is damp;
- There must be no smoking, eating or drinking on a site containing ACM.

Decontamination Procedure 1: Removing small pieces of ACM

- Identify the location of all visible ACM and spray each lightly but thoroughly with water;
- Once the ACM is damp, pick up all visible ACM with shovels and place in a clear plastic bag;
- If ACM debris is partially buried in soil, remove it from the soil using a shovel and place it in the plastic bag;
- Insert a large label inside each plastic bag stating clearly that the contents contain asbestos and are dangerous to human health and must not be handled;
- Tie the plastic bags securely and place them into labelled asbestos waste containers (clean metal drums) and seal each drum;
- Soil that contained ACM debris must not be used for backfill and must instead be shoveled by hand into asbestos waste containers;
- At the end of the operation, clean all shovels and any other equipment with wet rags and place

the rags into plastic disposal bags inside asbestos waste containers.

Decontamination Procedure 2: Removing ACM-contaminated backfill

- If soil containing ACM debris has inadvertently been used for backfill this must be sprayed lightly with water and shoveled out by hand to a depth of 300 mm and placed directly into asbestos waste containers (i.e. not stored temporarily beside the trench);
- Any ACM uncovered during the hand shoveling must be placed in a clear plastic bag;
- Once the trench has been re-excavated to 300 mm, if there is no visible ACM remaining, the trench may be refilled by excavator using imported clean topsoil.

Disposal

ACM should be disposed of safely at a local hazardous-waste disposal site if available, or at the city municipal dumpsite approved by government after making prior arrangement for safe storage with the site operator.

- The Contractor must arrange for the collection, labelling, evacuation and disposal site operator to collect the sealed asbestos waste containers as soon as possible and store them undisturbed at the disposal site.
- At the end of construction Contractors must arrange for the disposal site operator to bury all ACM containers in a separate, suitably-sized pit, covered with a layer of clay that is at least 250 mm deep.

a) Personal Decontamination

At the end of each day, all personnel involved in handling ACM must comply with the following decontamination procedure:

- At the end of the decontamination operation, clean the boots thoroughly with damp rags;
- Peel off the disposable overalls and plastic gloves so that they are inside-out and place them in a plastic sack with the rags used to clean the boots;
- If a disposable respirator has been used, place that in the plastic sack, seal the sack and place it in an asbestos waste container;
- All personnel should wash thoroughly before leaving the site, and the washing area must be cleaned with damp rags afterwards, which are placed in plastic sacks as above.

b) Clearance and Checking-Off

- The decontamination exercise must be supervised by site supervisors (engineering or environmental).
- After successful completion of the decontamination and disposal, the Contractor should visually inspect the area and sign-off the operation if the site has been cleaned satisfactorily.
- The contractor should send a copy of the completion notice to the PCU, with photographs of the operation in progress and the site on completion.

Training

PCU Environmental Specialist may hire the specialized companies to conduct training on ACCMP implementation for Contractors staff and PCU on the implementation of ACCMP. The training will include a session focusing on ACM, which covered:

- Risks of contact with ACM;
- Responsibilities for dealing with ACM on project's construction sites;
- The Project's ACMMP and the Protocol for site clean-up;
- Awareness-raising for the contractor staff.

Cost estimate

Costs incurred by contractors in implementing the ACMMP will be included in their budget in ESMP budget.

Annex 5. Chance Find Procedures

Chance Find Procedure

To be implemented under the Project during emergency activation

1. Purpose and Applicability

This procedure aims to protect cultural heritage and ensure compliance with the legislation of the Kyrgyz Republic and the World Bank’s Environmental and Social Standard 8 (ESS8). It is designed for immediate use by all project actors — including contractors, suppliers, PCU staff under the Ministry of Emergency Situations, volunteers, and temporary workers — in case of accidental discovery of objects with potential cultural, archaeological, historical, or religious value.

2. What Qualifies as a Chance Find

A chance find is any unintentional discovery made during project activities (including delivery, excavation, installation of temporary infrastructure, etc.) of:

- archaeological objects, ceramics, stone or metal tools;
- human remains or mass graves;
- remnants of ancient structures, foundations, roads, or walls;
- religious items, symbols, engravings, commemorative plaques;
- any unusual objects clearly different from natural soil or rocks.

3. Step-by-Step Response Procedure

Step 1 – Immediate Suspension of Work

- Responsible: Any person involved in the project who discovers the item (worker, driver, engineer, volunteer).
- Actions:
 - Immediately stop all activities within a radius of at least 10–15 meters of the find.
 - Do not touch, move, or attempt to remove the object.
 - Secure the area to prevent further disturbance.

Step 2 – Notification

- Responsible: Site supervisor or person responsible for safeguard matters on site.
- Actions:
 - Notify:
 - the designated safeguard specialist from the PCU (if available),
 - the regional project coordinator or emergency operations center,
 - and — where possible — local cultural or municipal authorities.

Step 3 – Temporary Protection

- Responsible: Contractor, site coordinator, or volunteer team.
- Actions:
 - Install temporary barriers (tape, pallets, makeshift fencing).
 - Assign a person to monitor the area until authorities arrive.
 - Prevent any unauthorized access.

Step 4 – Documentation

- Responsible: Safeguard specialist from the PCU or the contractor.
- Actions:
 - Complete the Chance Find Incident Form (see Annex A).
 - Take photographs from multiple angles.
 - Record GPS coordinates.
 - Prepare a short written description (what, where, when, who discovered it).

Step 5 – Notification of Authorities

- Responsible: Project coordinator or regional PCU representative.
- Actions:
 - Within 24 hours, send details to:
 - the Ministry of Culture, Information, Sports and Youth Policy of the Kyrgyz Republic, or local cultural authorities, as appropriate.

Step 6 – Decision on Next Steps

- Responsible: In coordination with the authorized cultural heritage body.
- Possible actions:
 1. Allow resumption of work (if item has no significance),
 2. Temporarily secure the item for future investigation,
 3. Adjust work routes/locations (if item is significant),
 4. Transfer the object to a museum or archive (if safe and permitted).

Step 7 – Resumption of Activities

- Work may resume only after formal written or verbal clearance, duly logged in the site observation record.

4. Implementation Principles

- This procedure shall be integrated into project’s overall emergency response system.
- Chance Find orientation shall be included in mandatory safeguard briefings for all contractors and volunteers.
- All supporting materials (leaflet, contact list, incident form) shall be kept in the on-site mobile documentation kit.

5. Sample Contact Information

| Authority | Contact | Notes |
|--|--------------------|--|
| Ministry of Culture, Information, Sports and Youth Policy of the Kyrgyz Republic | [to be determined] | Archaeology/Cultural Heritage Specialist |
| Local Administration (Akimat) | [to be determined] | Department of Culture or Architecture |
| PCU Safeguard Specialist | [to be determined] | Appointed during emergency activation |

Annex A. Chance Find Incident Form (Sample)

Form No. 1 – “Chance Find”

| Field | Content |
|---------------------------------|--|
| Date and Time | |
| Name of Reporter | |
| Location (GPS) | |
| Brief Description | |
| Photos Attached | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Urgency Level | <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High |
| Immediate Actions Taken | |
| Signature of Responsible Person | |