Republic of Uzbekistan

Rural Infrastructure Development Project

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

of Construction of Water Supply in Koshtal Rural Citizens' Assemblies of Zomin district of Jizzak region

Tashkent
February 2022

Table of Contents

LIST OF ABBREVIATIONS

AIIB	Asian Infrastructure Investment Bank
EA	Environmental Assessment
EIA	Environmental Impact Assessment
ESA	Environmental and Social Assessment
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
GoU	Government of Uzbekistan
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IA	Implementing Agency
IEC	Information, Education and Communication Campaign
IFC	International Finance Corporation
LRSCD	Land Resources and State Cadaster Department
MoED	Ministry of Economic Development and Poverty Reduction
OHS Plan	Occupational Health and Safety Plan
PAP	Project Affected Person
PC	Public consultation
PIU	Project Implementation Unit
PMC	Project Management Consultant
PPE	Personal Protection Equipment
RCA	Rural Citizens' Assemblies
RIDP	Rural Infrastructure Development Project
RPF	Resettlement Policy Framework
SCD	Sexually Communicable Diseases
SCEEP	State Committee on Ecology and Environment protection
SCS	Single Customer Services
SEE	State Environmental Expertise
SSEMP	Site-specific Environmental Management plans
UV	Ultraviolet radiation
WB	World Bank
WDF	Water Distribution Facilities
WSOC	Water Supply Operating Company

GLOSSARY

Dehkan	Dehkan farm consists of homestead lands, allotted to heads of families under inheritable life tenure, producing and selling agricultural products on the basis of the labour of family members.
Goskomecologiya	State Committee for Ecology and Environmental Protection of the Republic of Uzbekistan. State administration in the field of ecology, environmental protection, rational use and reproduction of natural resources.
GOST	Refers to a set of technical standards maintained by the Euro-Asian Council for Standardization, Metrology and Certification (EASC), a regional standards organization operating under the auspices of the Commonwealth of Independent States (CIS).
Hokimiyat	Public authority in places, carrying out interaction between local communities and the government at regional and national levels. Possesses the highest administrative and legal authority over the local population living in the territory within the jurisdiction.
Kengashi	Councils of People's Deputies of viloyats (provinces), tumans (districts), and towns, elected to the Oliy Majlis of the Republic of Uzbekistan and the President of the Republic of Uzbekistan can act on behalf of the people.
Khokims	Head of the Public authority in places, carrying out interaction between local communities and the government at regional and national levels. Possesses the highest administrative and legal authority over the local population living in the territory within the jurisdiction.
Kishlaks	A rural settlement of peoples of Uzbekistan.
Makhalla	Organization of the community type at local level, officially recognized in Uzbekistan, serving as interface between the government and the community and responsible for provision with the means of social support and cultural interaction of its members. Chairmen of makhalla are elected by local gatherings.
Uzhydromet	State governing body specially authorized for the solution of tasks in the field of hydrometeorology in the Republic of Uzbekistan.

Executive Summary

The Rural Infrastructure Development Project (RIDP, the “Project”) is an initiative of the GoU that promotes participatory, village-based development to reduce infrastructure and service-delivery gaps. The RIDP is based on the principles of community-driven decision-making, outreach to and inclusion of the poor and vulnerable within communities, gender equity, and transparency and accountability Using a learning-by doing approach. The RIDP is implemented by the MoED with support from the World Bank (WB) and the Asian Infrastructure Investment Bank (AIIB).

The implementation of the proposed Water Supply Project in Zomin district is triggered by the necessity to find solutions for the problems related to drinking water supply of rural population of RCA Koshtal.

Project development requires elaboration of Environmental Assessment of the Project, which is implemented according to the World Bank and the Government of Uzbekistan. The work on environmental assessment is started in November-December 2021.

Low populated and intensively cultivated project area is located in Jizzak region within the bounds of RCA Koshtal, Zomin district, where the main source of income for the population is agriculture. The key problem of selected RCA is the utmost scarcity of water resources, access to sources of drinking water supply, inadequate condition of water supply system.

The State Committee of the Republic of Uzbekistan on Ecology and Environmental Protection (Goskomecology) is the key executive body on protection of environment and natural resources. The Center for State Environmental Expertise is responsible for of Environmental Impact Assessment. The Committee coordinates also the state monitoring of environment.

A legal basis in the sphere of protection and the use of environment has been established in Uzbekistan, which is aimed at guaranteeing rights and duties stipulated by Articles 50 and 55 of the Constitution of the Republic of Uzbekistan. These are over than 20 laws, approximately 50 decrees of the President and of the Cabinet of Ministers of the Republic of Uzbekistan as well as other subordinate acts and normative documentation on management of resources, for example, on nature protection, water and water use, land code, state environmental expertise, as well as other adopted and appropriate decrees of the Cabinet of Ministers.

PIU is the project organizer on the republican level, khokimiyats of the Jizzak region and Zomin rayon, where proposed project will be implemented as well as Zomin vodokanal is the implementing organizations and the Jizzak regional committee on Ecology and Environmental Protection (Jizzak Oblkomecologiya); all of them are the key organizations responsible for water supply to the population, rational use and water resources protection.

The results of this Environmental and Social Impact Assessment (ESIA) confirm that proposed project arrangements will have a general positive environmental impact. In the process of project implementation there expected to be temporary and local disturbances (negative impacts) in connection with construction works, but it is expected that in the majority of cases these impacts can be reduced by implementing proper construction standards. Therefore ESIA research team confirms that the project is subject to Category B.

According to the Decree by the Cabinet of Ministers №541 Category 3 (low risk) is applicable for the project as it comprises item 7 «Water supply systems of the Republic of Karakalpakstan, regions and the city of Tashkent and the region».

The objective of Water Supply Project in RCA Koshtal is to improve drinking water supply to rural population of RCA Koshtal of Zomin district of Jizzak region. The main activities under the current project are: new construction of drinking water supply system infrastructure; institutional strengthening of the potential of project District Water Supply Organization; proposing measures on strengthening of commercial structure of District Water Supply Organization; study of environmental and social issues.

Possible environmental impact of the project will be mainly represented by temporary and local violations during the construction of water intake and distribution infrastructure. The most part of possible impact can be mitigated with observance of construction rules and safety measures, such as measures on minimizing pollution, protection of workers and local population, road traffic control of construction sites. To reduce possible impact of the project to the environment, the ESIA Report provides for the plan of mitigation measures for the period on construction works, plans of environmental monitoring and management over the condition of environment.

Creation of waterline system shall allow increasing the number of connections of population to waterline network that, in its turn, can increase unorganized discharge of wastes to environment, as well as shall adversely impact the soils and ground waters without solution to the issue of collection and treatment of waste waters from population in the region.

In this case waste waters as a result of high specific water consumption rate will burst onto area relief, drainage system and irrigational network, which will worsen environment sanitary-hygienic situation of the region.

The Alternatives chapter discusses the key concept of technological part of the project, possible options and proposals to final technical solutions on water treatment system.

Initially, environmental management will be implemented by organizations responsible for water supply as well as by the contractor responsible for the project. Further it will be followed by the competent organizations responsible for monitoring of environment under supervision of Goskomecology. The set of preliminary indicators is defined in the Environmental Mitigation and Monitoring Plan.

Prior to the public consultation several meetings were conducted with internal and external stakeholders, such as representatives of the provincial and districts level committee on Ecology and Environment Protection, district Khokimiyats and makhallas, land cadaster committee, district water supply agency (Suvoqova) and district energy entities.

Public consultation (PC) was conducted on December 4, 2021 at the Conference Room of the RCA Koshtal Zomin district. In the consultation, where technical, social and environmental aspects of the RIDP were presented and discussed. Wide publicity including population of RCA Koshtal and other relevant stakeholders were informed on the proposed activities on construction of water supply system within the framework of Water Supply System Project in RCA Koshtal. Draft report on environmental impact assessment was discussed with participants.

Key discussions of these consultations include the following: limited awareness on the project activities; concerns of participants with regard to damage to be possibly caused by the project; maintenance of water quality and its treatment; necessity of full soils and landscape rehabilitation to initial condition after installation of pipes especially in sites of water intake facilities location; proposals to accelerate project preparation due to sharp necessity in

activities implementation. Relatively too much time was dedicated to technical issues. Necessity in institutional changes was also expressed by stakeholders.

1 INTRODUCTION

In order to implement the Decree by the President of the Republic of Uzbekistan #PP-4898 as of 25 November 2020 it is necessary to implement the Project on Improvement of Water Supply System in Koshtal Rural Citizens' Assemblies (RCA) of Zomin district of Jizzak region. The Project is a part of the Rural Infrastructure Development Project to be implemented during the period of 2020-2024 and approved together with World Bank.

The Rural Infrastructure Development Project (RIDP, the “Project”) is an initiative of the GoU that promotes participatory, village-based development to reduce infrastructure and service-delivery gaps. The RIDP is based on the principles of community-driven decision-making, outreach to and inclusion of the poor and vulnerable within communities, gender equity, and transparency and accountability Using a learning-by doing approach, the RIDP will trial design adjustments aimed at increasing community participation in project decision-making and oversight, transparency and accountability in project implementation, and the quality and sustainability of subproject investments that can be replicated and scaled up through other state programs.

The RIDP is implemented by the MoED with support from the World Bank (WB) and the Asian Infrastructure Investment Bank (AIIB). The development objective of the RIDP is to (i) improve the quality of basic infrastructure, and (ii) strengthen participatory local governance processes in selected *qishloqs*, where “participatory local governance” refers to inclusive village participation in needs assessments; the planning, prioritization, and selection of subproject investments; and oversight activities including the monitoring of procurement, subprojects, and social audits. To increase participation and village-led decision-making and oversight, a key design innovation introduced under the RIDP is the provision of facilitation support to participating district administrations and qishloqs in the form of trained Qishloq Facilitation Teams.

The implementation of the proposed Water Supply Project in Zomin district is triggered by the necessity to find solutions for the problems related to drinking water supply of rural population of RCA Koshtal.

The Project will be implemented with the purpose of strengthening of social security of population as well as for implementation resources preserving policy, improvement of drinking water supply infrastructure and provision of effective functioning and preserving optimal level of tariffs for services rendered by the water supply enterprises.

2 ENVIRONMENTAL ASSESSMENT METHODOLOGY

General methodology of environmental assessment study includes certain stages for the overall assessment of the proposed activity. The most important of them are the following:

Study of current condition of environment and identification of key issues within the rayon;

- Determination of the scope of these problems;
- Analysis of main project activities and identification of relevant environmental impact sources;
- Analysis of impacts during construction works and after project implementation;
- Defining future condition of natural environment;
- Development of activities on reducing the impact on the environment (mitigation measures);
- Management and monitoring
- Public consultation.

The experts conducted general investigation of the components of natural environment, collection, analysis and processing of information on the condition of the current environment, social aspects and population health of Jizzak region and RCA Koshtal of Zomin district within project area according to data of RPE Suvokova, Uzgidromet, Jizzak Regional Production Enterprise, Jizzak Regional Department on Nature Protection, OJSC «Mirzachul Hydro-Geology», regional sanitary and epidemiological station, and central statistical department.

The following ecological aspects have been considered:

- Water resources;
- Land resources;
- Flora and fauna (Ecological resources);
- Social aspects.

2.1 WB EIA Requirements

According to WB Operational Policy, the project will be evaluated within the framework of environmental assessment from the point of impact on project territory and also ways of project design improvement and implementation by means of prevention, minimization or possibly elimination of negative environmental impact and positive impact increase will be defined.

According to type of environmental analysis of the WB, level of detail of environmental analysis depends on scope and environmental impact of proposed works. Categories selected in accordance with the type of investments and related level of environmental impacts is stated below:

- Category A: full EA with ESMP is required;
- Category B: it is necessary to provide a recent environmental analysis (although full EA is not required) and ESMP;
- Category C: EA or environmental analysis is not required.

The proposed project is classified as EA Category «B» (according to Sub-project Screening Document (Annex 3) and OP/BP 4.01 of the WB Safeguard Policies). Environmental assessment of Category «B» is required due to the civil works proposed regarding water resources usage, construction of water pumping, storage, treatment and distribution network facilities. Thus, the project requires an Environmental and Social Impact Assessment (ESIA) prepared before project appraisal.

The results of this Environmental and Social Assessment (ESA) confirm that proposed project arrangement will have a general positive environmental impact. In the process of project implementation there expected to be temporary and local disturbances (negative impacts) in connection with construction works, but it is expected that in the majority of cases these impacts can be reduced by implementing proper construction standards.

2.2 Uzbekistan EIA Requirements

Environmental impact assessment is implemented according to the Laws of the Republic of Uzbekistan «On the Protection of Nature», «On Environmental Expertise», Decree of the Cabinet of Ministers of the Republic of Uzbekistan No 541 as of 07/09/2020 «On the Further Improvement of the Environmental Impact Assessment Mechanism» as well as by other laws and legislative acts.

Objects and categories of their environmental impact are provided by above-stated documents, to be subject to state environmental expertise. Objects subjected to the expertise, are to be subjected to four categories of environmental impact.

- Category 1 – high risk;
- Category 2 – mean risk;
- Category 3 – low risk;
- Category 4 – local impact.

Goskomecologiya on state environmental expertise is a uniform system of Center for Environmental Expertise, methodological guidance of which implemented by Centrgosecoexpertise.

According to Section 21 of the Regulation on State Environmental Expertise (SEE), an application for the submission of EIA ('OVOS' is the national acronim) materials to the State Environmental Expertise is submitted by the customer through the personal account of the State Committee for Environmental Protection on the Internet in the Global information network of the State Environmental Committee.

The types of activities of I and II categories of environmental impact are pre-project and are subject to State Environmental Expertise, if the project documentation is confirmed in the prescribed manner at public consultations. The procedure for holding public consultations is given in Appendix 3 of this Resolution of the Cabinet of Ministers No. 541 of September 7, 2020.

Section 24 of the Regulation on SEE outlines the information that should be within the documentation at each of these stages. The three OVOS stages and their required deliverables are summarized as follows:

- Stage I: The 'Draft Statement of the Environmental Impacts (DSEI)' ('PZVOS' is the national acronym), to be conducted at the planning stage of the proposed project prior to development funds being allocated.

- Stage II: The 'Statement of the Environmental Impacts (SEI)' ('ZVOS' is the national acronym), to be completed where it was identified by the Glavgosecoexpertiza/Gosecoexpertise at Stage I that additional investigations or analyses were necessary. The Statement must be submitted to the Glavgosecoexpertiza/Gosecoexpertise before approval of the project's feasibility study, and therefore before construction.
- Stage III: The 'Statement on Environmental Consequences (SEC)' ('ZEP' is the national acronym) represents the final stage in the SEE process and is to be conducted before the project is commissioned. The report details the modifications to the project design that have been made from the Glavgosecoexpertiza/Gosecoexpertise review at the first two stages of the EIA process, the comments received through the public consultation, the environmental norms applicable to the project and environmental monitoring requirements associated with the project and principal conclusions.

SEE approval (Centrgosecoexpertiza/Gosecoexpertise opinion) is a mandatory document for project financing by Uzbek banks and other lenders (Section 18) at Stages I and II and for project commissioning at Stage III of the national EIA procedure.

All economic activities subject to SEE are classified into one of four categories:

- Category I — "high risk of environmental impact" (SEE is conducted by the national Glavgosecoexpertiza within 10 days, all EIA materials are required);
- Category II — "medium risk of environmental impact" (SEE is conducted by the national SNPC within 7 days, all EIA materials are required);
- Category III — "low risk of impact" (SEE is conducted by regional branches of (Gosecoexpertise) within 5 days, all EIA materials are required); and
- Category IV – "low impact" (SEE is conducted by regional branches of Gosecoexpertise within 3 days, only a questionnaire form is required).

Enterprise or any other organization (institutes, companies with such experience, private experts, etc, may be engaged) implements the arrangement and conduction of environmental assessment, whereas Glavgosekspertiza implements expertise of submitted reports on environment impact assessment and issues Conclusions in the order prescribed.

The following chapter represents a brief review of organizational, legal and political framework for the given Project.

The Table 1 presents approvals and permissions from national agencies which are needed to be received prior commencement of civil works and the project operation.

Table 1. List of necessary approvals and permissions

#	Name of the document	Time of receiving permission	Responsible entity
1	Environmental Clearance (Positive Conclusion of Environmental Expertise)	Prior commencement of the construction works	Water Supply Operating Company (WSOC)
2	Permission/license for using existing borrow pits or opening new ones	Prior commencement of the construction works	Contractor
3	Permission on cutting trees and bushes	Prior commencement of the construction works	Contractor

#	Name of the document	Time of receiving permission	Responsible entity
4	Statement on Environmental Consequences (Permission on waste water, emissions discharge, disposal wastes)	Prior commencement of operation of Water Distribution Facilities (WDF)s	WSOC
	Permission on special water use for ground water on wells-	Prior commencement of well ground water wellfield	WSOC

3 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

3.1 Legal Framework

3.1.1 National legislation on Protection of the Environment

A legal basis in the sphere of protection and the use of environment has been established in Uzbekistan, which is aimed at guaranteeing rights and duties stipulated by Articles 50 and 55 of the Constitution of the Republic of Uzbekistan. These are over than 20 laws, approximately 50 decrees of the President and of the Cabinet of Ministers of the Republic of Uzbekistan as well as other subordinate acts and normative documentation.

With regard to the present project, the following basic legal acts are acting at present in Uzbekistan that are directed to provide environment protection, guaranteeing public healthcare as well as managing the environment protection sector, namely Laws of the Republic of Uzbekistan:

- «On the protection of the environment» (1992);
- «On water and water use» (1993);
- «On the State Environmental Expertise» (2000);
- «On the State sanitary epidemiological supervision in the Republic of Uzbekistan» (1992);
- «On the protection and use of objects of cultural heritage» (2001)
- «On special protected areas» with amendments (30.08.93)
- «On protection and use of flora» (as of 26 December 1997)
- «On protection and use of fauna» (as of 26 December 1997)
- «On protection of atmospheric air» (as of 27 December 1996)
- «On wastes» as of 05/04/2002
- «On protection of the population and areas from emergency situations of natural and anthropogenic character» as of 20/08/1999.

The key acting subordinate acts and normative documents adopted by the Government of Uzbekistan in the sphere of environment protection are as follows:

- “On the Further Improvement of the Environmental Impact Assessment Mechanism” (No 541, 7/09/2020);
- “On Improvement of the Environmental Monitoring System in the Republic of Uzbekistan” (No 737, 5/09/2019);
- “On assigning the status of special protected areas to zones of sources formation of fresh ground waters” (No 302, 26/08/2002);
- "On Approval of the Regulations on the Order of Establishment of Water Protection Zones and Sanitary Protection Zones of Water Bodies in the Territory of the Republic Of Uzbekistan" (No 981, 11/12/2019);
- "On Measures for Further Improvement of Economic Mechanisms to Ensure the Protection of Nature" (No 820, 11/10/2018);

- "On The Further Improvement of Economic Mechanisms of Environmental Protection in the Territory of the Republic of Uzbekistan" (No 202, 12/04/2021)
- "On Approval of Some Administrative Regulations for Rendering Public Services in the Sphere of Natural Use" (No 255, 31/03/2018);
- "On Approval of the Instructions for Conducting Inventory of Pollution Sources and Regulation of Emissions of Pollutants into the Atmosphere for Enterprises of the Republic Of Uzbekistan" (No 105, 15/12/2005).
- State Standard - Water quality. O'z DST 951:2011 – Sources of centralized household water supply. Hygienic, technical requirements and classification code;
- State Standard - Drinking water. O'z DST 950:2011 – Drinking water. Hygienic requirements and quality control;
- State standard O'z DSt 1057:2004 "Vehicles. Safety requirements for technical conditions" and O'z DSt 1058:2004 "Vehicles. Technical inspection. Method of control";
- SanR&N RUz No.0255-08 "Main criteria for the hygienic assessment of the degree of pollution of water bodies in terms of danger to public health in Uzbekistan";
- SanR&N RUz No. 0179-04 Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the Republic of Uzbekistan including Annex 1;
- SanR&N RUz No. 0233-07 Sanitary norms and regulations for occupational health and environmental protection in the production and use of asbestos-containing products;
- SanR&N RUz No. 300-11 Sanitary rules and regulations for the collection, inventory, classification, disposal, storage and disposal of industrial waste in Uzbekistan;
- SanR&N RUz No. 0267-09 Admissible noise level into the living area, both inside and outside the buildings;
- SanR&N RUz No, 0120-01 Sanitarian Norms of allowed level of noise at the construction sites;
- SanR&N RUz No. 0202-06. The procedure for issuing permits for special water use, development and approval of projects of maximum permissible discharges (MPD) of substances entering with wastewater into water bodies and on the terrain;
- KMK (Construction norms and rules) 2.04.02-19 "Water Supply. External network and facilities";
- Decree of the Cabinet of Ministers of the Republic of Uzbekistan on Approval of the collection and disposal of used mercury-containing lamps. No. 266 of 21.09.2011;
- SanR&N RUz No. 0233-07 On occupational health and environment protection during production and usage of asbestos contained materials;
- SanPiN RUz No. 0372-20 (new edition) Temporary sanitary rules and norms for organizing the activities of state bodies and other organizations, as well as business entities during the application of restrictive measures during the COVID-19 pandemic.

The key acting subordinate acts and normative documents adopted by the Government of Uzbekistan in the sphere of Social and Resettlement issues are as follows:

- The Land Code (dated on April 30, 1998 with the latest changes from December 23, 2020).

- The Civil Code (CC)
- The Town Planning Code (January 06, 2021)
- Resolution of Cabinet of Ministers # 146 (May 25, 2011) (with revisions dated June 14, 2019).
- Resolution of the Cabinet of Ministers "On additional measures to improve the procedure for providing compensation for the seizure and provision of land and ensuring guarantees of property rights of individuals and legal entities" (November 16, 2019 # 911.)
- Resolution of the Government of Uzbekistan “On Measures on Improvement Efficiency of Preparing and Implementation of Projects funded by International Financial Institutions and Foreign Governmental Financial Organizations” (July 16, 2018 , # 3857).
- Resolution of the Government of Uzbekistan “About Approval of the Procedure of Accumulating and Use of Funds of Centralized Stocks for Compensation of Damages to Individual Persons and Legal Entities Due to Acquisition of Lands for Public Needs»(December 26, 2018, # 1047).
- Resolution of the President “About the Measures for Fundamental Improvement of Urbanization Processes” (January 10, 2019 # 5623)
- Resolution of the President of Uzbekistan “About the Measures for Basic Improvement of Investment Climate in the Republic of Uzbekistan”. (August 1, 2018 # UP-5495)

3.1.2 International agreements in the sphere of nature protection and prevention of transboundary impacts

The international treaties and agreements in environmental aspect relevant to this project include:

- Convention on Long-Range Trans-boundary Air Pollution (Geneva, 1979);
- Vienna Convention for the Protection of the Ozone Layer (Vienna, 1985);
- Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal, 1987);
- Convention on the Control of Movements of Hazardous Wastes and their Disposal (Basel, 1989);
- Convention on Environmental Impact Assessment in Trans-boundary Context (Espoo, 1991);
- Convention on the Protection and Use of Trans-boundary Water Courses and International Lakes (Helsinki, 1992);
- Convention on the Trans-boundary Effects of Industrial Accidents (Helsinki, 1992);
- United Nations Framework Convention on Climate Change (New York, 1992);
- Convention on Biological Diversity (Rio de Janeiro, 1992);
- United Nations Convention to Combat Desertification in those countries experiencing serious drought and/or desertification, particularly in Africa (June 17, 1994);
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITEC, Washington, 1997);

- Agreement on the Conservation of African-Eurasian Migratory Waterbirds (1995), signed in the Hague in the framework of the Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 1998);
- Convention on the Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar, 2001);
- Agreement under the United Nations Framework Convention on Climate Change (Paris Agreement, 2016).

3.1.3 General national structure for environmental assessment

For the purpose of the present environmental assessment actions of the project "Water supply improvement in RCA Koshtal Zomin district of Jizzak region" the following governmental bodies shall be considered:

Khokimiyats of region and districts, where the current project is located;

Jizzak region VK and its rayon divisions, project executors;

Jizzak Regional Department on ecology and nature protection, the body responsible for overall protection of environment on the territory of project, subdivision of Goskomecology.

Local bodies of state power (regional hokimiyats)

hokimiyat is an executive body of state power at the level of oblasts, rayons and towns of the republic. Hokim heads executive and representative branches of state power on the corresponding territory and ensures implementation of acts of legislation including those related to the sector of provision of water supply and sewerage. Hokim is appointed by the President of the RU and approved by the Kengash of peoples' deputies.

State Committee of the Republic of Uzbekistan on ecology and environmental protection

The State Committee of the Republic of Uzbekistan on ecology and environmental protection (Goskomecology) is the basic executive body exercising functions on protection of environment and natural resources. The Committee is directly subordinated to Cabinet of Ministers of the Republic of Uzbekistan and is responsible for coordination of activities of other national structures and institutions on environment protection on central, regional and rayon levels.

Other corresponding governmental agencies:

- **Ministry of Health of the RU** is competent to exercise state sanitary supervision over observance of sanitary norms, rules and hygienic standards by all organizations located in the territory of Uzbekistan in line with bodies comprising the system of state sanitary an epidemiological supervision. Centers of state sanitary an epidemiological supervision provides organization and fulfillment of a complex of sanitary and epidemiological measures.

- **Republican Sanitary and Epidemiological Service** is part of the Ministry of Health, the head of the Sanitary and Epidemiological Service is simultaneously the Deputy Minister of Health and the Chief State Sanitary Doctor of the Republic of Uzbekistan. The Service is entitled to control activities related to provision of sewerage to populated areas, effective cleaning measures and disinfection of waste waters discharged to superficial water reservoirs. The Service is authorized to prohibit or temporarily suspend operation of water supply, sewerage, hydro technical and other communal facilities.

- **Ministry of culture of the RU** (Main scientific and production department on protection and use of objects of cultural heritage). Ministry of culture issues of the RU ensures state protection of objects of cultural heritage by way of (and in addition) issuing permissions on conducting land, construction, land improvement, economic and other works on conservation of objects of cultural heritage as well as research activity on the territories of cultural heritage objects (Article 10 of the Law of the RU «On the protection of the objects of cultural heritage»).

3.2 Organizational structure

The system of bodies of state power engaged in the process of management and regulation of environment protection and governed by the Law "On the protection of nature" comprises the following:

- **The Cabinet of Ministers of the Republic of Uzbekistan** – exercising common policy in the area of nature protection.
- **Local bodies of state power (regional khokimiyat)** – defining key trends of nature protection on respective territories, adoption of regional (territorial) environmental programs.
- **The State Committee of the Republic of Uzbekistan on ecology and environmental protection** (Goskomecology of the RU) is a specially authorized over-ministerial and coordinating body exercising state supervision and inter-branch management in the sphere of nature protection, use and reproduction of natural sources. Goskomecology is subordinate and accountable to Cabinet of Ministers of the Republic of Uzbekistan. The system of bodies is comprised as follows: Goskomecology of the Republic of Karakalpakstan, regional (oblast) and Tashkent city committees on nature protection, inter-district, district and town committees (inspections) on nature protection as well as lower organizations and institutions. Goskomecology interacts with respective nature protection bodies of other countries in solving international and regional problems including issues of polluting transboundary rivers and water reservoirs.

3.3 Institutional arrangements in the water supply and sewerage sector

JSC "Uzsuvtaminot"

Resolution of Cabinet Ministries of the Republic of Uzbekistan No.169 dated from 30 March 2021, states that JSC "Uzsuvtaminot" established in November 2019 under Decree of the President PF-5883 is the country single water utility overseeing all existing Suvokavas transferred to Limited Liability Companies (LLC), the designated Executing Agency (JSC "Uzsuvtaminot") for development and implementation of water supply and sanitation projects. Jizzak Suv Taminoti LLC is responsible for water supply and wastewater services in the whole of Jizzak Province.

3.4 Legal framework of NGO and civil society participation

At present, interaction of the government with environmental NGOs is conducted within cooperation with Uzbek Ecological Forum of NGOs. Uzbek Ecological Forum of NGOs (*Ecoforum*) is a union of environmental and environment-oriented non-governmental and non-commercial organizations and initiative groups. Its activity is directed to consolidation of public environmental organizations' efforts in solving problems of environmental character.

Ecoforum of non-governmental and non-commercial organizations of Uzbekistan was registered in April 2007 by the Ministry of Justice of the Republic of Uzbekistan and united environmental NGOs acting in the country. The key objective of establishing Uzbek *Ecoforum* of NGOs was uniting NGOs' efforts for improvement of effectiveness of civil society participation in environment protection as well as undertaking joint actions upon solving environmental problems. In its actions directed to solve environmental problems and assist sustainable development, *Ecoforum* cooperates with state, international and regional organizations, NGOs and mass media. At present *Ecoforum* has signed memoranda on cooperation with Goskomecology of the RU as well as other regional organizations such as CAREC.

3.4.1 Legal framework of NGOs participation

In general, the basis of participation of citizens, public associations in the sphere of nature protection management is laid down by the Constitution of the Republic of Uzbekistan (Article 50, 55). Law of the RU as of 09/12/1992 «On nature protection» by Articles 12-13 regulates the right of citizens to unite in public associations on nature protection, request and receive information on the condition of environment and also measures undertaken for its protection as well as competences of established NGOs. Legislation on environmental protection stipulates civil society participation as for a) single citizen or groups of citizen; b) via citizens' self-governing bodies and c) via non-governmental and non-commercial organizations.

Directly the participation of non-commercial nature protection organizations is ensured at the stage of environmental expertise of documentation for construction of new objects and reconstruction of existing objects with the economic purposes. Particularly, Article 27 of the Law «On nature protection», as well as Article 23 of the Law "On environmental expertise" as of 25/05/2000 provides NGOs and citizens with possibility to exercise public (social) environmental expertise of an economic activity in any sphere of sector, which needs to have environmental justification from the part of independent groups of specialist on the initiative of NGOs itself and at their own account or charge free basis. Conducting of public expertise can be implemented independently from undertaking of the state environmental expertise. It is prohibited to interfere into the process of public environmental expertise implementation. Although it is established that conclusions of public environmental expertise are considered to be of voluntary character.

3.4.2 Legal framework of participation of citizens' self-governing bodies

In accordance to Article 7 of the Law "On citizens' self-governing bodies" citizens' self-governing bodies do not enter the system of bodies of state power, and accordingly, they represent one of forms of civil society organization. The Law "On citizens' self-governing bodies" as of 14 April 1999 provides an opportunity for development and implementation of local initiatives including those that touch upon environmental problems.

Gathering of citizens of a rural settlement, *kishlak, aul* and town (city) makhalla quarterly hears the account of heads of rayon, town and regional (oblast) *hokimiyats* on issues comprising the sphere of self-governing bodies' competences, and also within its competences – reports of heads of enterprises, institutions, organizations located in appropriate area on the matters of environment protection, beatification and etc. Besides, citizens' gatherings exercise public control over implementation of laws and other acts of legislation as well as their own decisions. They undertake decisions on the use of financial resources of enterprises and organizations located in the appropriate area on contractual basis and for purposes of beautification, gardening and sanitary cleaning; as well as activities directed to preserve surrounding environment.

4 DESCRIPTION OF THE PROJECT

4.1 Current State of Water Supply System

The administratively designed object belongs to the RCA Koshtal, Zominskiy district, Jizzak region. See Figure 5.

At the present time, the projected part of the RCA Koshtal does not have a centralized water supply system. Part of the population of RCA Koshtal drilled several wells on their own and equipped water supply through self-made water towers for household needs that do not meet drinking water standards (Figure 1), and part of the population uses spring water.

Figure 1. An existing water supply system in RCA Koshtal

The design and construction of the facility is envisaged on the basis of the Decree of the President of the Republic of Uzbekistan on measures to implement the "Rural Infrastructure Development" Project with the participation of the International Development Association of the World Bank and the Asian Infrastructure Investment Bank No. PP-4898 dated November 25, 2020.

4.2 Planning works

The Construction of Water Supply in RCA Koshtal of Zomin district Project will involve the (i) construction of new wells, water towers with water treatment system, (ii) construction of water distribution networks. The WB identified this project as a Category B undertaking, meaning the requirement for the preparation of an ESIA. The original ESIA consultant carried out assessment to comply with undertake an environmental screening document for this Sub-project, and confirmed a similar conclusion that the Project should be categorized as a B project.

The working draft defines the following scope of work:

- drilling of wells in the amount - 3 pcs.
- installation of a water tower with a volume of 25 m^3 each in an amount - 3 pcs.

- construction of a house for a cascade and a bactericidal installation in an amount – 3 pcs.
- laying of polyethylene pipes with a length - 26.2 km
- arrangement of water supply wells VK;
- device of shut-off valves.

In accordance with the working documentation, Well (Well1) and Water Tower (WT1) are planned to be located on the same territory. The rest of the Wells (Well2 and Well3) and the Water Towers (WT2 and WT3) will be located separately (Figure 2). Pressure pipes will be laid between the wells and water towers to pump water into the towers (Figure 3). After decontamination, water will be supplied from the towers through the ring-shaped pipe system to users. The developed project scheme provides for the laying of pipes only along existing rural roads, sidewalks and reserve lands without affecting private property.

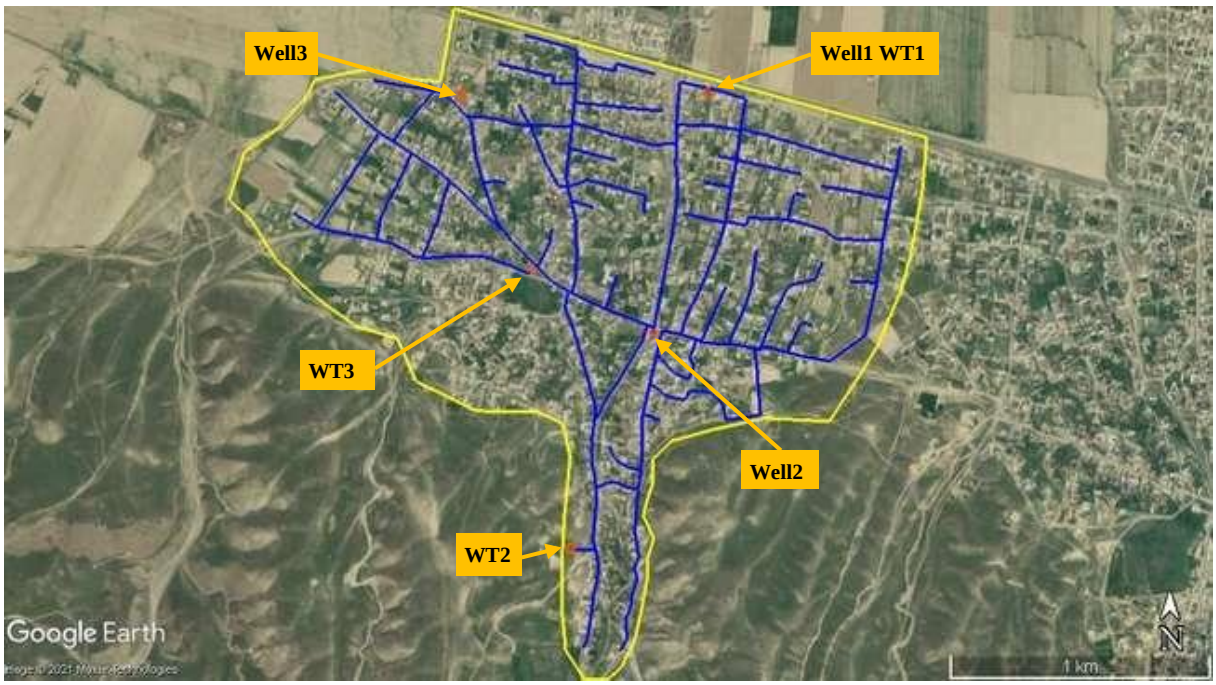


Figure 2. Water Supply System Scheme of RCA Koshtal

Parameters of the occupied area of the intake structure:

- Total occupied Land area - 900 m^2 x 4 = 3600 m^2
- Building area -19.50 m^2 x 4 = 78 m^2
- Hard surface area -228 m^2 x 4 = 912 m^2
- Landscaping area - 652.5 m^2 x 4 = 2610 m^2

Trench parameters:

- Trench length - 26.2 km;
- Trench depth – 1.1 m;
- Trench width - 0.7m.

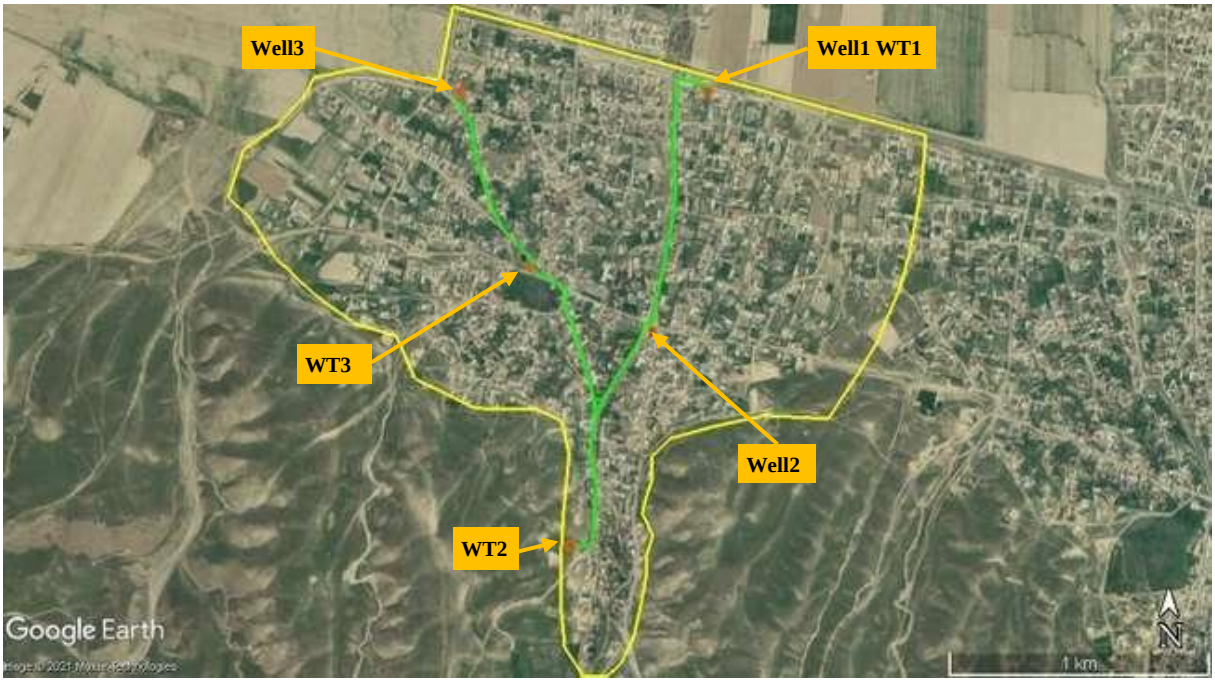


Figure 3. Pressure Pipeline Scheme between Wells and Water towers of RCA Koshtal

4.2.1 Wells

Well construction includes: rotary drilling of a well, filter string and casing pipes, clay de-claying, backfilling of the annular space with gravel.

On the territory of water intake facilities the following is carried out:

- installation of a cascade house and a bactericidal installation.
- installation of water towers;
- installation of a transformer substation;
- laying of polyethylene pipes;
- arrangement of water supply wells VK;
- device of shut-off valves.
- fences, gates and wickets.

4.2.2 Water Towers

The tower equipment consists of a pressure-distributing pipeline, overflow and drain pipes. From the pumping station through a pipeline, water enters the lower part of the tower support. The same pipeline serves to drain water from the tower to consumers. The overflow pipe ends at the highest water level in the tank. To allow complete emptying of the tower during flushing and repairs, a special mud pipe is laid from the lower part of the support.

To accommodate the necessary equipment, a well is arranged with a tower. In which on the water supply and downpipe are installed gate valves with a manual drive, and the end of the overflow pipe is released above the ground by sprinkling at a height of 3.2 m from the ground. from the well, the drain pipe is diverted with a rupture of the jet into a drain or an open ditch.

For the possibility of using the tower for fire extinguishing and water sampling, a riser is installed on the pressure distribution pipeline 70 mm in diameter i with shut-off valves with two connecting heads. Filling the barrel of the tower with water makes it possible to lower the water horizon from the maximum level in the tank to the foot of the tower support, which creates a reserve supply of water consumed when the supply of electricity is cut off.

4.2.3 Building for water neutralization

To disinfect water after wells, a house is being built. A bactericidal unit DUV - 1A500-NMST is installed inside the task.

Ultraviolet radiation has a high efficiency - 99.9% against a wide range of microorganisms: bacteria, viruses, spores and parasitic protozoa, including their chlorine-resistant forms. UV radiation destroys pathogens of infectious diseases such as typhoid, cholera, dysentery, salmonellosis, typhoid fever, viral hepatitis, etc.

The UV water disinfection method is safe. Unlike oxidizing technologies (chlorination, ozonation), after exposure to ultraviolet radiation, harmful organic compounds are not formed in water, even if the required dose is repeatedly exceeded. The absence of the risk of overdose simplifies the operation of the equipment. The use of UV disinfection makes it possible to reduce the amount of chlorine used by up to 5 times and to minimize the negative impact of the by-products of reagent methods on the health of children.

Ultraviolet acts only on microorganisms practically instantly (3-10 sec) and does not change the chemical composition and physical properties of water.

In UV systems DUV-N, the source of ultraviolet radiation is an amalgam lamp. The amalgam lamp does not contain liquid mercury, which guarantees safe use and easy disposal of the lamp.

5 DESCRIPTION OF THE ENVIRONMENT

5.1 Geography and topography

Jizzak region is located in the center/east of the country. It borders with Tajikistan to the south and south-east, Samarqand Region to the west, Navoiy Region to the north-west, Kazakhstan to the north, and Sirdaryo Region to the east. It covers an area of 21,210 km².

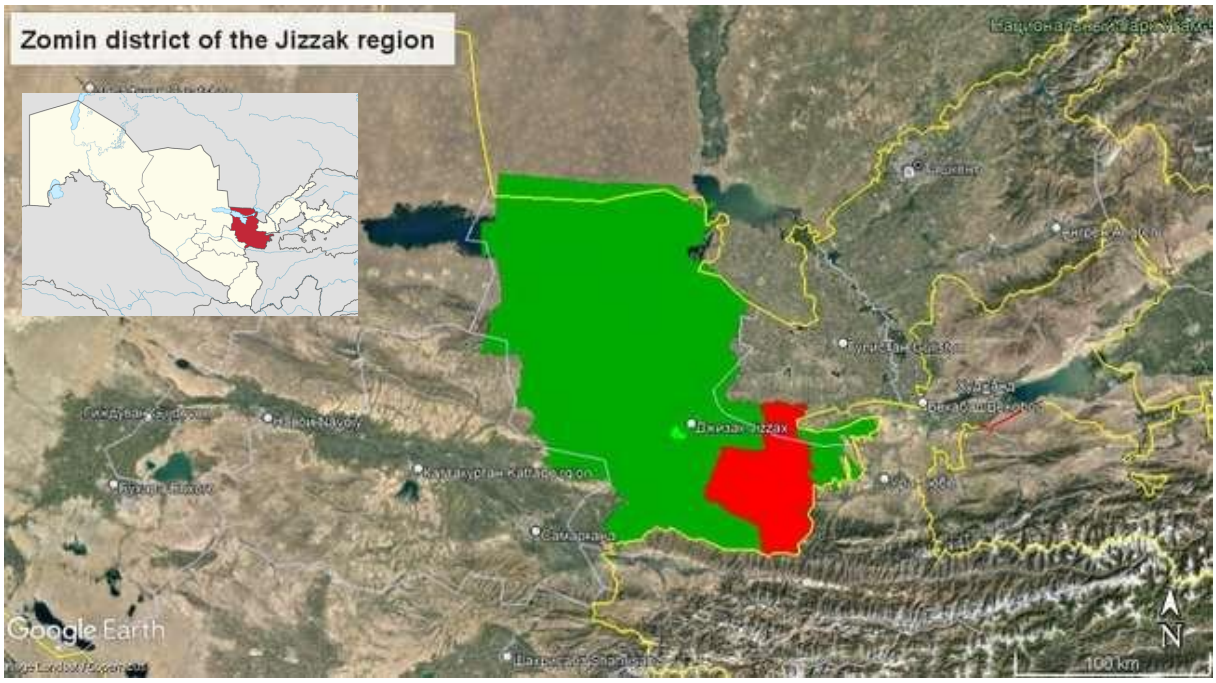


Figure 4: Location of Jizzak region and Zomin District

The population is estimated to be around 1,395.5 thousand people (as of 1st July 2020). The density of the population is 68.1 persons per km². The regional capital is Jizzak city. The major towns include Dustlik, Gagarin, Gallyaaral (Gallaorol), Pakhtakor, and Mardjanbulak. Figure 4 depicts the location of Jizzak region in the territory of the country.

Zomin district is located in the southeastern part of the Jizzakh region. From the north it borders on the Syrdarya region, from the south - with the Bakhmal district of the Jizzakh region and the Sughd region of the Republic of Tajikistan, from the east - with the Yangiabad district of the Jizzakh region and the Sughd region of Tajikistan, from the west - with the Zarbadar and Jizzak districts of the Jizzak region.

The total area of the district is 2,663 km² and it is in second place (after Farish district) in the Jizzak region.

The northern, central and eastern parts of the Zomin region are occupied by lowlands, and in the southern and southwestern parts there are mountains and adyrs.

Altitude increases from north to south. The Turkestan ridge passes through the southern part of the Zomin district. Figure 5 depicts the location of Koshtal RCA in the Zomin district.

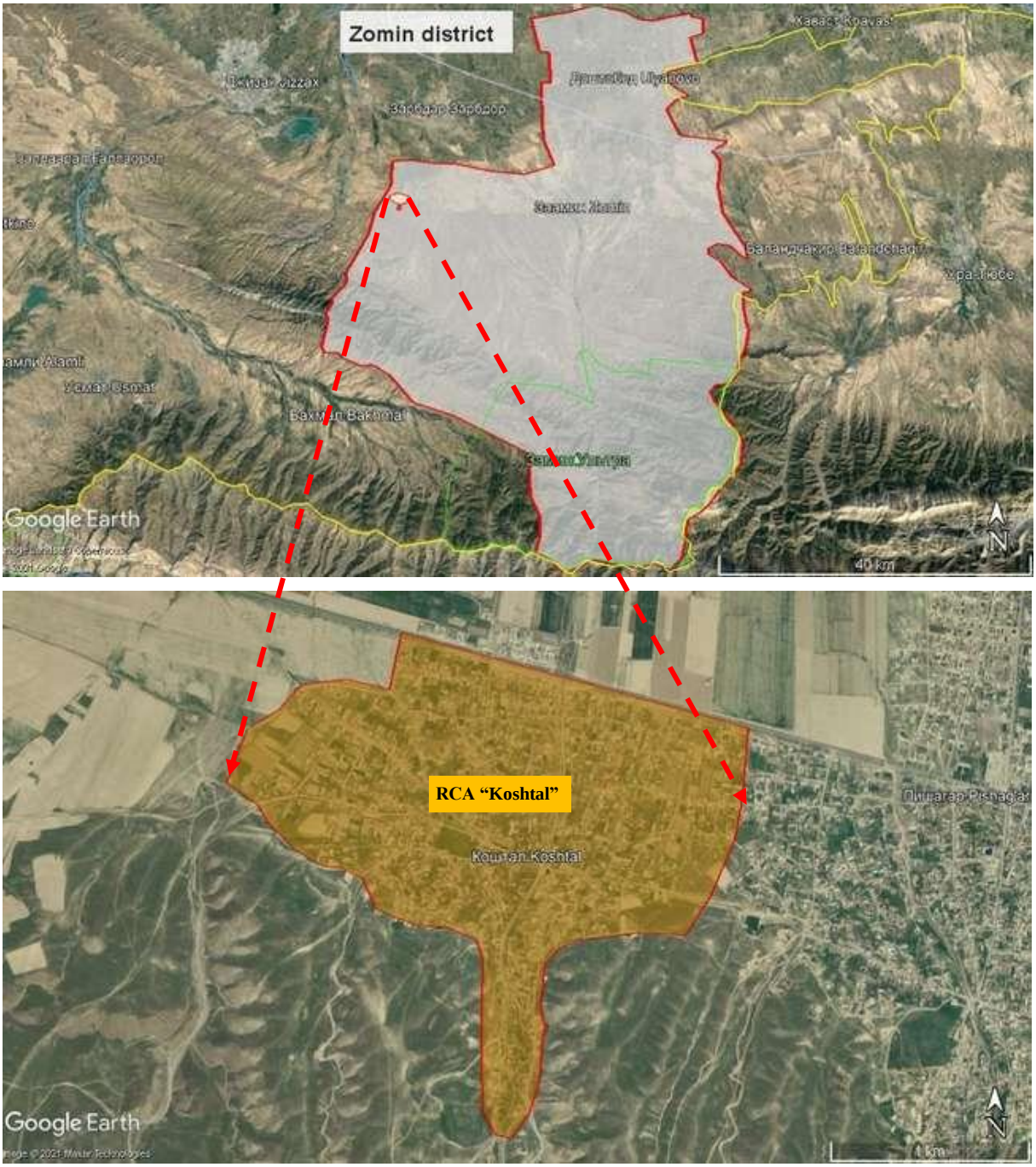


Figure 5. Location of Koshtal RCA in Zomin District of Jizzak region

5.2 Climatic data

The climate of the Jizzak region is subtropical inland with a clearly pronounced seasonality. Winter (a period with an average daily temperature below 0 °C) lasts on average from the 3rd decade of November to the 2nd decade of March.

During the calendar winter, there may be short (3-8 days) periods of frost (with night temperatures down to -13 °C, less often up to -20 °C).

The average January temperature is -1.5 °C, and the average July temperature is + 32 °C. There are frequent thaws throughout the winter, when the temperature rises from -5 °C to + 7 °C and higher, sometimes reaching values of +12 .. + 16 °C.

Transition seasons are short enough. Almost summer temperatures are often recorded in mid and late March, in April.

Summer (the period with daytime temperatures above + 20 °C and daily average above + 15 °C) lasts from the 2nd decade of April to the 3rd decade of October.

In June and July, daytime temperatures usually exceed 40 degrees (on average 20-40 days per summer season).

On average, 350-360 mm of precipitation falls on the territory of the region per year (the main part of precipitation is in spring and autumn). The growing season lasts 239-240 days.

Air Quality and Noise

Air Quality. More recent ambient air quality data for Jizzak city is obtained from the Jizzak provincial center of sanitary and epidemiological welfare and public health. The data (Table 2) provided showed that most of the pollutants tested were within permissible standards.

Table 2. Average annual atmospheric air analyze of the Jizzak city

Parameters	2017		2018		2019		2020		Permitted concentrations (daily average) mg/m^3
	No. of tests	Test results	No. of tests	Test results	No. of tests	Test results	No. of tests	Test results	
Ammonia	104	0.1 – 0.6	116	0.12 – 0.7	136	0.3 – 0.8	58	0.2 – 0.7	0.12
Nitrogen dioxide	108	0.02	111	0.019	126	0.018	42	0.015	006
Sulphur dioxide	108	0.032	111	0.041	126	0.029	42	0.025	0.02
Phenol	52	0.004	49	0.002	64	0.002	28	0.001	7.0
Anhydrous hydrogen fluoride	52	0.065	49	0.042	64	0.046	28	0.043	8.0

Source: sanitary and hygienic laboratory of the Jizzak provincial center of sanitary and epidemiological welfare and public health, 2020

Since this project will have no significant effect on air quality, the baseline data do not need to be extensive. During construction a few pieces of heavy equipment and trucks will be used to carry out the work. The dust control along the haul road in and out of the site, these temporary problems should be well controlled.

Noise. The noise level according to Jizzak Provincial Health Department averages around 50 dBA, well within the national standards in Uzbekistan which is 65-70 dBA in the day and 50 dBA at night (KMK 12.01.08-96).

5.3 Topography, Geology, Soils and Hydrology

Aside from the mountains on its eastern border, Jizzak province is a semi desert dryland, much of it in the Arnasy Depression, a flat expanse, which through vast irrigation has become an important dryland agriculture area. The eastern mountains are snow-capped and provide much of the local water in many small streams which, as soon as they reach lower elevation, are diverted for irrigation purposes.

Geomorphologic structure of these soils is loess (red)-like loam, interspersed with lenses of sand and gravel from 2 to 40 m thick. Water-saturated pebblestone is found in deeper layers and the soils are subject to subsidence.

Shallow aquifer groundwater is located at 3 -5 m depths in a few areas, but more often at depths of 10-20 m. Ground water is recharged by infiltration from irrigation waters and precipitation. Groundwater has high TDS levels and is saline making it unfit for use on concrete production or for safe consumption[1].

5.4 Water resources

Surface water

The main sources of surface waters of Jizzak region are the Sanzar and Zaaminsu Rivers. The Sanzar River is the largest in Jizzak province and flows from Chumkurtau Mountains at 3300 meters for 123 km at which point it has been diverted into the Kly Canal. It has a catchment area of 2,600 km2, and is fed by snow melt and has an average annual water flow of 6.9 m3/sec.

In Jizzak City the river turns northward and as it passes Kly Village it is diverted into the Kly Canal, much of it being used for irrigation. The Kly is also a collector for wastewater and ends up discharging its flow into the Aydar Lake.

The Zaaminsu River is the second largest river of the province, but since it is totally outside the potential influence zone of the project, is not addressed further in this ESIA.

Much of Jizzak Region was a semi desert and salt pan area, converted to agricultural production of mainly cotton and wheat, via a massive irrigation system developed during the Soviet era.

The highly saline Aydar Lake exists due to collector-drainage waters as well as discharge of excess water of Chardara water reservoir. Despite being a manufactured, the lakes average 28 km wide and when there is water, 160 km long and averaging 12.5 m deep. Between 2006 and 2011, the mineralization (alkalinity) of Aydar Lake doubled, increasing from 1 to 2 g/l.

Ground Water

Water for Jizzak region is supplied from ground water sources located along the Sanzar and Zaamin Rivers as well as some springs. In 2011 total volume extracted was 57.7 million m3. Ground water aquifers are recharged via precipitation infiltration, mountain runoff and irrigation channel infiltration. This latter source is of concern since heavily polluted waters are often discharged into these irrigation/drainage canals, as for example the Ulgursay canal which has been discharging untreated sewage into the collectors since 2006. The main sources of groundwater pollution in Jizzak are public utilities, agricultural production practices, industrial

[1] Jizzak has an above average incidence of both kidney stones and gallstones, both associated with highly mineralized drinking water (RoU Health Ministry statistics, 2014)

plants, and poorly functioning wastewater treatment plants (National Report on Environment and Use of Natural Resources in Uzbekistan. Tashkent, Chinor ENK, 2013).

Due to the diversion of the Sanzar River's water for irrigation, the downstream wells now suffer; water levels are decreasing, and hardness of the water increases markedly affecting the taste and potability. In some of ground water wells (Promzona, Kurgan, Saribazar, Uch-Tepa, Sanzarselskiy and Devon areas) mineralization (total alkalinity) level from 1150 to 2050 mg/L, and hardness level of 8.0 to -18.6 mg-equivalent/L have been recorded. These levels render water unsafe to drink, and if consumed lead to kidney and gallstones.

5.5 Biological resources

Flora and Fauna - Uzbekistan pays great attention to biodiversity and its maintenance. Among the first conventions to which the Republic joined is the Convention on Biological Diversity (1995). Convention "On Conservation of Migratory Species of Wild Animals" (1998), the Convention on Wetlands of International Importance especially as Waterfowl Habitats (2001). In Jizzak province there is Zaamin Mountain-Juniper State Nature Reserve and Zaamin National Natural Park which are located in the northern part of Turkestan mountain range. These protected areas are 1760-3500 meters above sea are the habitat for the white-clawed bear, bearded vulture, black stork, but are located 55 km from the subproject area. There is no special biodiversity protection zone within the lands allocated for new construction or along the water distribution network.

Critical Habitat: Environmentally Sensitive Areas, Rare and Endangered Flora and Fauna and Protected Areas

Critical Habitat: Environmentally Sensitive Areas, Rare and Endangered Flora and Fauna and Protected Areas - The project area does not contain any of these features. For many kilometres around the well and watertowers and along the water distribution network, the area is rural landscape with buildings, roads and road shoulders.

5.6 Socio-economic conditions

Jizzak province was founded on December 29, 1973. The administrative center of the province is Jizzak city. The province is divided into 12 administrative districts: namely Arnasay, Bakhmal, Dustlik, Farish, Gallaorol, Jizzakh, Mirzachul, Pakhtakor, Yangiabad, Zomin, Zafarobod, Zarbdor. The administrative division of Jizzak province is presented below.

The population of Zomin district is about 165,100 people (as of 1st July 2020). Estimated population growth based on historical trends is 2.2% per year (Source: State Committee on Statistics).

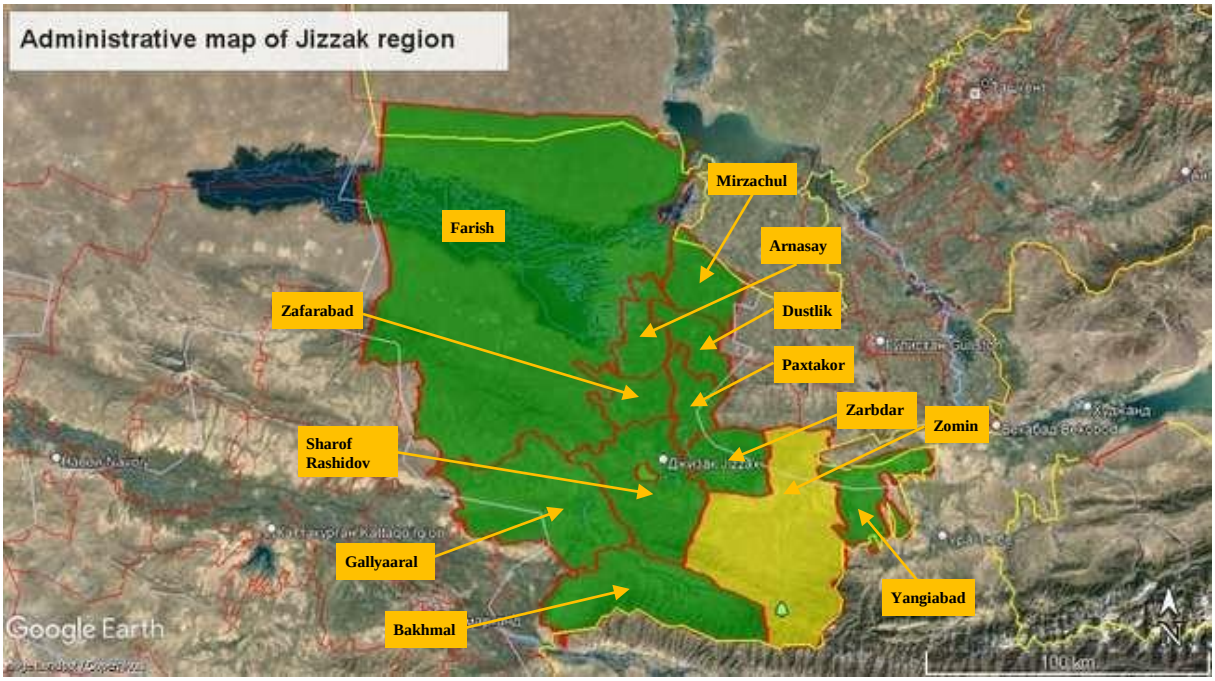


Figure 6. Administrative map of Jizzak region

The main socio-economic indicators of Jizzak region are provided in Table 3.

Table 3: Socio-economic indicators of Jizzak region

Name		Indicators
Territory, km^2		21,210
Population		
Population density, per/km^2		65.2
Total number of people		1,382,100
Women, per		686,500
Men, per		695,600
Urban population, per		654,000
Rural population, per		741,500
Education Institutions		
Primary schools		544
Secondary professional (colleges)		76
Academic lyceums		3
Higher education institutions		2
Medical Institutions		
Hospitals		60
State clinics		180
Infrastructure, km		
Transport	Car roads	2540
	Railways	274.1
	Airport	
Social (was commissioned)	Gas pipelines, km	42.6
	Water supply networks, km	317.9

The main sectors of agriculture in the province are cotton growing, grain growing, vegetable growing, horticulture and viticulture, and meat and dairy farming. The main industries are electric power industry, machine building, metalworking, building materials, and light and food industry.

5.6.1 Agricultural and Mineral Development

The land fund of the district as a whole is 286,500 hectares. Of these, 197,300 hectares are used for the cultivation of agricultural products.

The following branches of agriculture are mainly developed in the Zomin region: cattle breeding, agriculture (cotton growing, vegetable growing, melon growing, horticulture, viticulture).

There are several *shirkat* (cooperative) farms specializing in animal husbandry, poultry farming, beekeeping, grain growing, cotton growing and vegetable growing.

The total number of farms exceeds 600. Annually, an average of 25,000 tons of grain and 16,700 tons of cotton are grown in the district.

The project area is mostly in an rural setting and as such there is no appreciable agricultural or mineral development affected by the project.

5.6.2 Transportation

A railway branch on the Tashkent - Samarkand line, as well as highways along the Zomin - Jizzak, Zomin - Gulistan, Samarkand - Tashkent routes pass through the territory of the Zomin region. Bus service in many directions is supported.

5.6.3 Standard of Living and Community Health

Zomin is a middle to low-income community, based on RoU data, Poverty in the subproject area is due to factors such as a lack of employment opportunities and inadequate provision of water supply and sanitation services. Positive impacts from the Koshtal subproject are likely to include improvement in the quality of life, time-saving and reduced workload particularly for women, improved household and personal hygiene, and improved health status of adults and children particularly through a reduction in the incidence of infectious diseases.

Public health is the most important factor in the socio-economic development of the state and society. It is generally accepted that human health is determined by three main factors: genetics, quality of living and environmental factors. Therefore, the health indicators, the epidemiological situation, changing patterns of disease are directly dependent on condition of the environment. The national situation is improving (Table 4) while conditions in Djizzak are not as good (Table 5).

Dysentery incidence in three provinces of the country varies between 64 and 228 people per 100 000 people according to the Ministry of Health of Uzbekistan (Table 4).

Table 4. Number of acute dysentery cases per 100000 people

Regions	2006	2007	2008	2009
Jizzak region	124.8	79.0	136.3	79.0
Samarknd region	100.9	64.0	100.4	64.0
Syrdarya region	220.0	182.4	227.6	182.4

Total the country	**133.9**	**120.8**	**122.2**	**80.7**

Source: Statistics Yearbook, State Statistics Committee of Uzbekistan, Tashkent 2013

Table 5. Water-Quality related disease incidence in Djizzak city (No. / 100,000 people)

Disease	2009	2010	2011	2012	2013
Gallstone	270	284	264	283	300
Urolithiasis (Kidney Stones)	119	116	128	134	141
Viral hepatitis	128	120	123	152	468
Acute intestinal infections	209	199	200	223	453

Source: Data of State Epidemiological Surveillance of Djizzak province and Djizzak city health department.

Data for the period 2009-2013 on the incidence of four other water-borne diseases were obtained from the Djizzak Health Department and suggest a steady rise in incidences (Table 5), underscoring the urgency of better water treatment. The rise in gallstones and urolithiasis is more associated with highly mineralized water.

Goskomecology reported that in 2013 in Djizzak Province 12% of potable water tests (likely an underestimate) did not meet nation standards due to bacterial contamination (National Report on Environment and Use of Natural Resources in Uzbekistan, State Nature Protection Committee of Uzbekistan, Tashkent: Chinor ENK, 2013).

5.6.4 Human Settlement in the Project Area

According to the results of the socio-economic study of the Sub-project, the project will permanently affect land holding of one household located on the territory of the RCA Koshtal. Well No. 1 and water tower No. 1 will be installed on the territory of the household (Figure 7). The household is owned by Ulbozor Zhabarovna Kainarova; according to cadastral documents, it owns 0.24 hectares. In fact, the household plot occupies 0.73 hectares. On the land plot there are two one-storey buildings with a total living area of 71 m^2. For construction of Well No. 1 and water tower No. 1 the project will require acquisition of 900 m^2 (9 %) of the current household plot. The land to be acquired is currently vacant and not used for any purpose (see the letter from the khokimiyat Annex 7) The household cannot plant trees or a vegetable garden there, as there is no water. The head of the household agreed to use her land for the construction of a well as a gift to the project (that is, free of charge), due to the fact that constant access to water is needed to manage the household and improve the life of the family (Figure 8). The household will be connected to water supply under the project. During public consultations the household has been informed they have the choice to refuse having project impact on their plot without compromising the implementation of the project (see Letter of consents of, Ulbozor Zhabarovna Kainarova Annex 6). The household has agreed to have the well installed on their plot as they will not sustain any economic or other losses, and will gain water supply.

Figure 7. Discussion meeting with PAP and WDF "Well1 WT1" site

Figure 8. Discussion process with Ulbozor Zhabarovna Kainarova

In addition to the permanent land impact described above, the project is expected to cause temporary impacts on household fences and on public infrastructure (streets, sidewalks) during installation of pipes through the community. The developed project scheme provides for the laying of pipes only along existing rural roads, sidewalks and reserve lands without affecting private property. Temporary impacts will be fully restored and / or compensated by the civil works Contractor. The contractor will ensure that residents are duly notified of upcoming works and expected impacts prior to beginning of works, and that all safety measures, concerning traffic management, pedestrian crossings, access to private and public buildings, are ensured throughout the implementation of works. The contractor will maintain detailed photo materials prior and post-construction to provide evidence that all impacts have been adequately restored.

5.6.5 Archaeological and Historical Features and Sites

Based on discussions with the Zomin Suv Ta'minot and the Administration's office there are no archaeological sites, or historical or culturally important features or sites within 200 m radius (centred over the alignment) of any of the water distribution network. The RCA Koshtal does have important site, Zomin National Park is located about 30 km in the south-east site of the Zomin district, from the project affected areas.

5.6.6 Access roads

The project does not provide the construction of new access roads. The existing roads are being used as access roads will be used the existing road. Upon the completion of construction works the roads and other local infrastructure will be restored to at least their pre-construction condition.

5.6.7 Land Acquisition

For the construction of 26.2 km water distribution networks no land acquisition is required. The networks will be laid within the borders of the existing site, along the grounded and asphalted roads. Temporary impacts on private municipal infrastructure may be expected, as described above.

6 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Anticipated the project's environmental impacts were reviewed at the three stages – pre-construction, construction and operation stages.

This subproject will have a large positive impact on RCA Koshtal, bringing water supply services to many thousands of families. Some temporary impacts associated with construction works will occur. To deal with those impacts, the most important mitigation measures are proposed, and described in the Environmental and Social Management Plan (ESMP) section. The ESMP is provided in detail in Table 17.

6.1 Pre-construction stage

Impact

During pre-construction stage the following aspects may impact on effectiveness of implementation of environmental safeguards during whole project cycle and may lead to noncompliance with requirements: (i) design of water storage facilities will not unsure efficient water quality, (ii) non-efficient sanitarian zone for wells and water towers may lead to deterioration of water quality, (iii) non-inclusion of environmental requirements into the bidding and contract, (iv) no compliance on receiving all required permissions, (v) purchase of goods, techniques and machinery which is not comply with IFC Exception List (Project Negative/ Exclusion List) set forth at Appendix 7 of the Project ESMF Document.

Design of water treatment facilities

Selection of inefficient water treatment technology may lead to production of water with quality which does not meet national standards for drinking water (GOST 950-2011. Hygienic requirements and quality control). For the current project, ground water from the Well No 1, No 2, and No 3 wellfield will be used as a water source for drinking water supply for RCA Koshtal. Water disinfection by UV disinfection method is planned (DUV - 1A500-NMST bactericidal installation) and laboratory analysis will be conducted to ensure water quality with biological indicators (GOST 950-2011).

Locations of all new WDFs have been selected in accordance with national requirements indicated in regulation ShNK 2.04.02-19 "Water Supply. External network and facilities". For almost all WDFs and ground water intake the condition for first level of sanitarian zone are met.

Some changes in WDFs location could be done at the stage of the project details design. It may lead to generating new impacts which will require updating the current ESIA.

The following activities are proposing to mitigate impacts identified at the preconstruction stage.

Mitigation measures

- During detail design stage layout WDFs, route of main trunk and water distribution networks will be updated with consideration of minimizing impact on environment and population during construction and operation phases;

- Ensure that first sanitarian zone (within 30 meters from the longest well) for ground water intakes is in compliance with national standards ShNK 2.04.02-19 “Water Supply. External network and facilities” (2019) and the territory is fenced ;
- IA with assisting Project Management Consultant’s (PMC) environmental specialist will ensure inclusion of environmental provision along with ESMP in the bidding documents and in contracts for Contractors;
- Bids evaluation needs to be done with consideration of: capacity of bidders to meet ESMPs requirements, proposing adequate budget efficient for implementation ESMP, existence of good practice in environmental performance within other similar projects;
- Within 30 days after contract award and prior to commencing any physical works, Site-specific Environmental Management Plan (SSEMPs) will be developed by the Contractors under the guidance of the PMC, and be endorsed by PMC before submission to Project Implementation Unit (PIU) for approval;
- In addition to SSEMPs, Topic Specific SEMPs need to be prepared by Contractors, endorsed by PMC and approved by PCU for the following activities: Traffic Management Plan for construction of distribution network within settlements, Waste management Plan for sites with demolishing works, Hazardous Wastes Management Plans as described in the next sub-sections, Construction Camps Management Plan and Occupational Health and Safety Plan (OHS Plan);
- Goods procured for project implementation will be done in compliance with IFC Exception List (Project Negative/ Exclusion List) set forth at Appendix 7 of the Project ESMF Document;
- Environmental specifications have to be included in bidding packages for purchase machinery within the project. Particularly, toxic level of machinery must meet “Euro 3” environmental requirements as defined by national regulations[2];
- If any changes in the project design will take place, the ESIA has to be updated accordingly.

6.2 Construction stage

6.2.1 Physical resources

Impact on air quality

During construction stage pollutants emissions will be caused by earth works, construction/demolishing activities and exhaust gases from vehicles. It is expected that dust pollution will occur more frequently. Especially, risk of dust pollution will increase during the windy weather and movements of trucks with high speed inside settlements.

At the same time equipment and vehicle with improper technical characteristics or in poor conditions also may lead to pollution by exhausted gases. Improper waste management, particularly burning of construction and domestic wastes may lead to air pollution.

Some of WDFs (Well No 1, No2, No3 and Water tower No 1, No2, No3) are located close to settlements (25-30 meters). For this settlements dust level monitoring needs to conducted. In

[2] Resolution of President of RUz “On measures for further development of production at the Samarkand automobile plant and renewal automobile park”, dated from December 14, 2006

case of exceeding standards for dust level for this area (0.15 mg/m^3)[3] additional mitigation measures for dust control need to be undertaken – more often watering or installation of dust screen.

Mitigation measures:

During construction period regular mitigation measures shall be used in the most of the cases:

- Apply watering of construction sites and roads inside settlements during dry season;
- Cover transported bulk materials;
- Control speed limitation for vehicles during movement inside of settlements - no more than 40 km/h;
- All vehicles and techniques must comply with technical requirements and have to pass regular inspection as indicated into the national standards[4];
- Prohibit open burning of solid wastes generated particularly from labor camps and construction activities;
- Clean wheels and under carriage of haul trucks prior to leaving construction site;
- Restrict demolition activities during period of the high winds or under more stabile conditions when winds could nevertheless direct dust towards adjacent communities;
- Conduct monitoring of dust level in front of settlements located close to constructed WDFs. In case of exceeding standards for dust level for this area (0.15 mg/m3)[5] additional mitigation measures for dust control need to be undertaken – more often watering or installation of dust screen;
- Pipe lying works in street with width less than 2 meters, needs to be conducted manually.

Noise and vibration

Noise

To assess an anticipated noise level during these type of works calculations were done based on existing information about operation of various equipment. During construction works on WDFs and water pipelines temporary noise emissions may be caused from the following equipment:

a. Drilling machine
b. Construction equipment
c. Earth moving activity
d. Generators
e. Vehicles used for material transport

[3] SanR&N RUz No.0179-04 Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the Republic of Uzbekistan including Annex 1
[4] "O'z DSt 1057:2004 Vehicles. Safety requirements for technical conditions" and "O'z DSt 1058:2004 Vehicles. Technical inspection. Method of control".
[5] SanR&N RUz No.0179-04 Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the Republic of Uzbekistan including Annex 1

Level of noise generated by various equipment was used based on existing standards. It is expecting that during the following equipment will be used for construction of wells, water towers, and pipe laying of distribution network.

Table 6. Noise Level Form Various Techniques (at the distance 50 feet[6])

Noise source	Equivalent noise level, dB
Excavator	81
Dozer (Bulldozer)	82
Compactor (ground)	83

Source: WSDOT measured data in FHWA's Roadway Construction Noise Mode Database (2005).

As a rule, noise caused by moving equipment is reduced at some distance. Such reduction has logarithmic properties. In case of noise caused by construction activities, noise spread pattern from the noise point is used, that can be determined as: Noise level1 –

Noise level2 = 20 log r2/r1.

Table 7. Noise Levels at the Various Distances

Distance	Equivalent noise level (maximum), dB		
	Excavator (81)	Dozer (82)	Compactor (83)
5	78	79	80
10	66	67	68
75	63.7	64.7	65.7
100	60	61	62
300	48.6	50	50.6

Taken in account that due to fencing (at least 2 meters) which will be constructed first on the project sites, noise levels will decrease by 6 dB. In addition, noise levels will reduce by 1.5 dB due to non-asphalted soil absorption.

Based on results of noise propagation presented in Table 7, and taking into account reductions in noise level listed above, noise level at the distance 100 m from the fence site will comply with standards - 55 dB[7] for daytime in the area adjusted to the living houses. Baseline assessment showed that ambient noise level for the area adjusted to construction exceeds standards on 10 dB and it is equivalent to 65 dB. In accordance with IFC requirements when "noise impacts should not exceed the levels of presented in Table 1.7.1, or results in a maximum increase in background levels of 3 dB at the nearest receptor location off-site"[8]. Therefore, noise level generated by construction equipment should not exceed 68 dB in front of houses faced to construction site.

Project sites are located in the RCA Koshtal settlement. Therefore, for this site anticipated noise impact was assessed.

Thus, for the territory of "Well 1 WT 1", the first row of houses from the south-west to the construction site are located a distance of approximately 5 meters, and from the east site houses are located a distance of 10 meters (Figure 9). According to ShNK-2.04.02-19 "Water supply. Outdoor networks and facilities" the boundary of the first zone of the zone of waterworks should coincide with the fence of the site of the facilities and be provided at a

[6] One feet is equivalent to 0.348 meters, 50 feet is meters 15m

[7] SanN&R 0267-09, Acceptable noise levels for habitable areas Uzbekistan 0267-09 and IFC, EHS Guidelines, 2011

[8] IFC, EHS General Guideline, 2007, chapter 1.7.

distance from the walls of other structures and the shafts of water towers - at least 15 m (clause 10.17). Since the water tower is being designed in the middle of the territory, the sanitary and protective boundaries of the first belt of the zone are observed and resettlement of the nearby residential buildings is not required. On the territory of the second zone of the zone of the surface source of water supply, it is necessary to regulate the allocation of territories for settlements (clause 10.25). However, they could therefore be considered as sensitive receptors due to the location of the impact zone (closer than 100 meters). The second and further rows of houses should not be impacted by noise from construction activities due to reduction of noise of walls and fences of first row houses.

Figure 9. The territory of "Well 1 WT 1" (RCA Koshtal)

In the territory "Well 2", residential houses are located at a distance of 30 and 68 meters (Figure 10). It means that noise levels in these locations will exceed the norms of 55 dB. Therefore, implementation of mitigation measures are needed for this site as well.

Figure 10. The territory of “Well 2” (RCA Koshtal)

There are several houses located in the impact zone (100 meters) of the territory of “WT 2” in RCA Koshtal. They are located at distances of 52 meters and 88 meters. Therefore, for this site, additional mitigation measures will also have to be applied. See Figure 11.

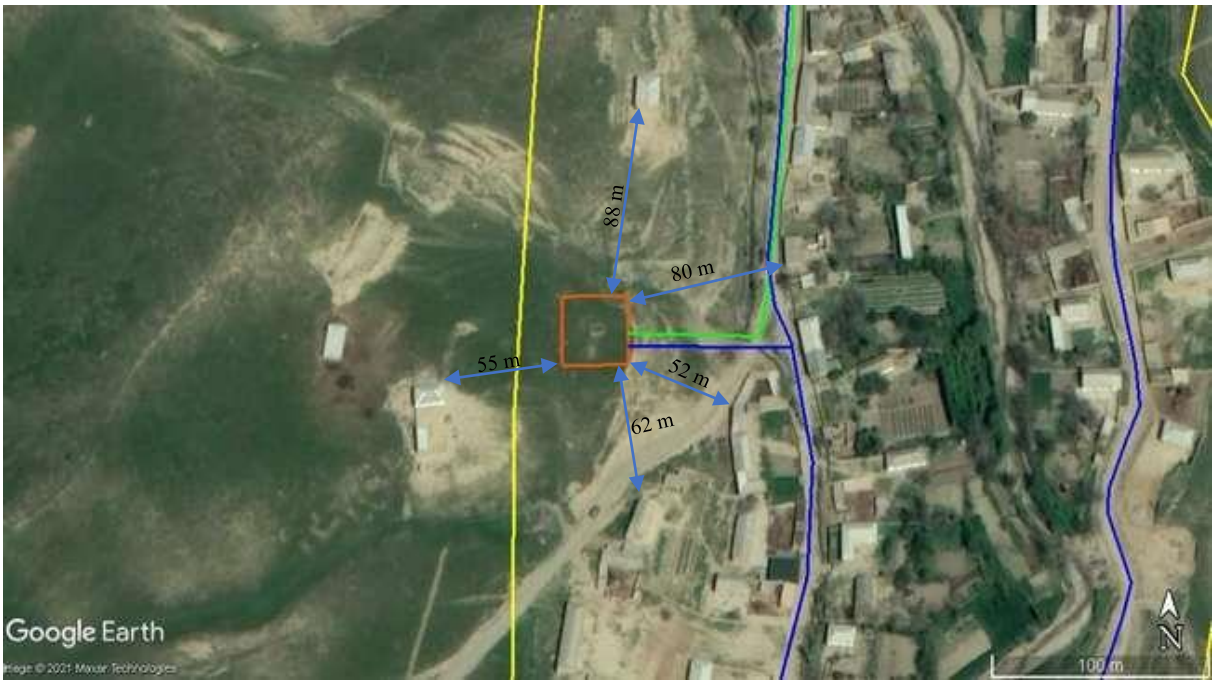


Figure 11. The territory of “WT 2” (RCA Koshtal)

There are 4 houses and 1 administrative building located in the impact zone (100 meters) of the territory of “WT 3” in RCA Koshtal. They are located at distances of 50 meters and 92 meters. Therefore, for this site, additional mitigation measures will also have to be applied. See Figure 12.

Figure 12. The territory of "Well 3" (RCA Koshtal)

There are 4 houses and 1 administrative building located in the impact zone (100 meters) of the territory of "WT 3" in RCA Koshtal. They are located at distances of 50 meters and 92 meters. Therefore, for this site, additional mitigation measures will also have to be applied. See Figure 13.

Figure 13. The territory of "WT 3" (RCA Koshtal)

During pipe lying works some noise impact will occur due to work of technics. Even impact will be short term, it is required to implement mitigation measures.

Mitigation measures:

The following measures need to be implemented to avoid noise and vibration impacts on project sites located within RCA Koshtal:

- Install acoustic barrier next to the WDFs, "Well No1 Water tower No1";
- For the rest of WDFs acoustic screens have to be used if construction activities will be implemented closer than 100 m;
- If noise level in front of houses near to WDFs Well 2, Well3, WT2 and WT3 increases 68 dB during the day time, install acoustic screen;
- During construction period establish limits on speed for vehicles inside of settlements (40 km/h);
- In case of receiving any complaints from population, noise measurements need to be conducted and in case of exceeding established standards, additional mitigation actions for decreasing noise level need to be undertaken (establishing temporary sound absorbing barriers and others);
- Schedule construction so as to minimize the multiple use of the most noisier equipment near sensitive receptors (houses, schools);
- Use of Personal Protective Equipment (PPE) by workers involving in demolishing and construction works in conditions of increased noise level (more than 80dB) is mandatory;
- Conduct weekly noise measurements at the all WDFs. Make sure that noise level not exceed 55 dB during the day time;
- During pipe lying works in the site where digging of tranche will be implemented closer than 2 meters to the wall use compact less noisier pipe lying techniques;
- Inform population about anticipated works.

Vibration

Vibration impact

Vibration impact during construction stage could be caused by the same machinery. The level of vibration and its propagation within a distance was calculated in accordance with methodology indicated in Transportation and Construction Vibration Guidance Manual (2013).

The Manual with reference to Transit Noise and Vibration Impact Assessment (Federal Transit Administration 2006), provides information on vibration level from different construction equipment (Table 8). The table does not provide data on mobile and assembles cranes since vibration level is not significant.

Table 8. Vibration Source Amplitudes for Construction Equipment

Equipment	Reference in PPV at 25 feet (in/sec)
Excavator (Calm shovel drop)	0.202
Lange Bulldozer	0.089
Small Bulldozer	0.003
Loaded trucks	0.076

Source: Federal Transit Administration 1995 (except Hanson 2001 for vibratory rollers).

Using these source levels, vibration from this equipment can be estimated by the following formula:

$$PPV_{eqp} = PPV_{Ref}(\frac{25}{D})^n$$

Where:

PPV_{Ref}= reference PPV at 25 ft.

D = distance from equipment to the receiver in ft;

N = 1.4 (the value related to the attenuation rate through ground).

Values of vibration level calculated in accordance with this formula are presented in Table 9.

Table 9. Calculation of Vibration from Equipment

Distance	Vibration from equipment							
	Lange Bulldozer		Small Bulldozer		Loaded trucks		Excavator	
	in PPV (in/sec)	in dB	in PPV (in/sec)	in dB	in PPV (in/sec)	in dB	in PPV (in/sec)	in dB
20	0.12	67	0.004	37	0.1	66	0.25	
30	0.07	63	0.002	34	0.05	62	0.16	
50	0.03	58	0.001	29	0.028	57	0.08	

Source: PPTA's Consultants, 2018.

National standards for vibration level in residential houses are provided in Sanitarian Norms and Rules (SNR) № 0146-04 "Design of the living houses in climatic conditions of Uzbekistan". For living houses the standards is 67 dB for night time and 72 dB for day time with frequency in 37 and 61 Hz and for night time is 67 dB.

Table 10. National Standards for Vibration

Period	Permanent vibration, dB
Day time	72
Night time	67

The standards are provided in "Transportation and Construction Vibration Guidance Manual" (2013). The Manual provides two types of limits for vibration level – for "frequent events" and "infrequent events". The Manual defines that "Frequent events" (continuous) is defined as more than 70 events per day and "Infrequent events" (single event) is defined as fewer than 70. As showed calculation of maximum amount of trucks which will move to and from site will be more than 80. Therefore, more stringent (lower threshold) is applied for the current assessment for vibration impact. For example, a threshold for residential buildings with plastered walls/... is 0.2 in/s for continuous vibration and for single event condition is 0.5 in/s.

The Table 11 presents maximum continuous vibration level for preventing damages for different type of buildings. This data could be used as thresholds for both phases – construction and operation for structural integrity of buildings/houses.

Table 11. Maximum Continuous Vibration Levels for Preventing Damage (mm/s)

Description of building type	AASHTO (1990)			SAS (1992)		
	mm/s	in/s	dB*	mm/s	in/s	dB*
Historic sites or other critical locations	2.5	0.09	94	2.5	0.09	94
Residential buildings with plastered walls / Building with foundation walls and floors in concrete, wooden ceilings and walls in masonry	5.1-7.6	0.09	100-104	5.1	0.2	100
Residential buildings in good repair/ Building with foundation walls and floors in concrete, walls in concrete or masonry	10.2 – 12.7	0.40.49	106 - 108	7.6	0.29	100
Engineered structures without plaster / Buildings in steel or reinforced concrete	25.4 – 38.1	0.99 – 1.4	114-118	12.7	0.49	108

AASHTO = American Association of State Highway and Transportation Officials, SAS = Swiss Association of Standardization.

Source: California Department of Transportation (2013), US Transportation Research Board (2012).

* Converting into dB was done based on formula provided in para 57.

To convert vibration level presented in dB into vibration velocity presented in mm/s and vice versa the following formulas were used:[9]

$$V_{dB} = 20 * Lg10(V) + 86,$$

$$V = 10^{(V_{dB-86})/20}$$

Where

V_{dB} - vibration level in dB, and V – vibration velocity in mm/s

As showed results of calculation of vibration level (Table 19), vibration from construction activities on this stage will not impact on people living on surrounded area and structures since it is below standard in 72 dB for day time.

Anticipated vibration levels at the distances 65 meter is below standard. It will not also impact on residential building as well, since the highest vibration level will not exceed 0.2 in/s or 100 dB (Table 21).

Main Construction activities and construction of access road

1. Data on vibration from equipment generating vibration during these stages of construction activities are presented in Table 12. For completion of construction of access road (asphalting) vibration roller will be used as well.

Table 12: Noise Level Form Various Techniques (at the distance 50 feet[10])[11]

Noise source	Equivalent noise level, dB
Excavator	0.202
Dozer (Bulldozer) large	0.089
Compactor (ground) (vibration roller)	0.21
Loaded Trucks	0.076

[9] http://vibrocenter.ru/vibroacc.htm

[10] One feet is equivalent to 0.348 meters, 25 feet is 8.7 meters.

[11] Part Two – Construction noise impact assessment, Table 7-4.

Noise source	Equivalent noise level, dB
Vibrator for concrete compaction	0.21
Pulling machinery	0.0734
Backhoe	80

Source: FTA, 2006

Calculation of vibration level at the different distance are presented in table 13.

Table 13: Calculation of Vibration from Equipment

Distance	Vibration from equipment									
	Lange Bulldozer		Pilling machenary		Excavator		Vibration for concrete compaction		Compactor (vibration roller)	
	in/s	in dB	in/s	in dB	in/s	in dB	in/s	in dB	in/s	in dB
20	0.12	68	1.00	86	0.28	75	0.29	75		
30	0.07	63	0.57	81	0.16	70	0.16	70		
50	0.03	56	0.30	76	0.08	64	0.08	64		
	0.03	56	0.21	72	0.06	62	0.06	62+9+		

Therefore, vibration level, generating during construction works will not exceed standards for people (Table 13 – 72 dB) at the distance 65 and 70 m. It will also not exceed standard for buildings and structures Table 21 (0.2 in/s). For integrity of building located in the distance 30-40 meters from construction site, usage of piling machinery on the distance closer than 60 meters may have some risk. Even calculation of vibration level showed that the vibration level will not exceed the level which may impact on people's health and houses integrity, it is recommended to conduct a visual observation of the farmer's temporary house before commissioning construction works and on monthly base during works of pilling machinery. In case of any cracks or damages mitigation measures need to be applied:[12] pre-drilling, using alternatives non-impact drivers, using cast-in-place or auger cast piles and etc.

Mitigation measures:

The following measures need to be implemented to avoid noise and vibration impacts on project sites located within settlements:

- Schedule land leveling so as to minimize the multiple use of the noisiest equipment on the site;
- Do not use several machineries at the same time within the distance closer than 75 meters to the west border of the construction site
- Use of Personal Protective Equipment (PPE) by workers involving during construction stage in the sites where noise level will exceed 80 dB as per national regulation;
- Inform population about anticipated works;
- Schedule construction works between 8 am and 7 pm. In case of extension working hours, inform community (RCA Koshtal) in advance;
- Conduct visual observation of temporary faced to construction site on integrity

[12] List of mitigation measures indicated in "Transportation and Construction Vibration Guidance Manual", 2013, Chpater 8.

- Nevertheless, noise level monitoring needs to be implemented on the regular in accordance with the methodology indicated into the Environmental Monitoring Plan (Chapter 10, Table 18). In case of exceeding noise level during construction phase on 3 dB in comparison with baseline situation, additional mitigation measures, such as construction acoustic screen could be applied;
- Conduct a visual observation of the house near to WDF "Well No1 Water tower No1" before commissioning construction works and on monthly base during works of pilling machinery. In case of any cracks or damages mitigation measures need to be applied: pre-drilling, using alternatives non-impact drivers, using cast-in-place or auger cast piles and etc.

Therefore, impacts on air quality, noise and vibration will be temporary and it could be mitigated by implementation of recommended measures.

Impact on water resources

The surface water may be polluted due to improper placement of excavated soil, poor management of construction camps, and improper storage of construction materials, leakage of fuel and lubricates from construction machinery, washing of vehicles and techniques without proper treatment.

Construction of new wells as well as construction of water towers will not be conducted next to the water bodies.

Implementation of the mitigation measures and continuously monitoring of water quality in the points indicated in Environmental Monitoring Table (Chapter 10) is necessary to avoid deterioration of water quality.

Mitigation measures:

The following mitigation measures shall be implemented to minimize impact on water resources:

- Construction and labor camps, including storage places for lubricant, fuel and other oils will be located 100 m away from water bodies;
- Conduction of refueling, oil replacement or repairing works will be banded at the area within 50 m from water streams;
- Sanitary waters and solid wastes will not be released directly into water streams;
- Topsoil stripped material shall not be stored where natural drainage will be disrupted;
- Water samples will be taken and compared with the baseline monitoring results obtained in the preconstruction stage. Location of monitoring points, frequency and monitoring substances are presented in Environmental Monitoring Plan (Chapter 10).

Groundwater table level in the Project zone is located lower 18-20 meters. Therefore, potential impact arises from maintenance of contractors' camps, transport, maintenance of vehicles and handling and storage of lubricants and fuel. The required provisions for construction camps and monitoring of ground water quality are described in the subsections describing impacts on soil quality and waste management.

Although location of WDF is selected at the highest elevation in order to provide good pressure of pumping water, there is some possibility that ground water may impact during construction of WDFs. Therefore, it is recommended that all construction works related to digging on the

depth more than 3 meters (pump station and administrative buildings basement) need to be conducted during non-irrigation season. The irrigation season in that region is May-August. If this period could not be avoided, usage of standard technology for construction in areas with high water logging needs to be applied – pumping water into the nearest drainage canal.

Direct or indirect (through soil) pollution of ground water may deteriorate of water quality in the hand pumps, which population use for drinking purposes. Therefore, monitoring of water quality in the hand pumps houses located close to the rehabilitating or constructing new WDFs needs to be undertaken by Contractor on the monthly base. In case of exceeding standards, ground water pollution source(s) need to be identified and repaired.

Impact on soil

The main anticipated impacts on soil during construction stage will be: disturbance or loss of top soil, its compaction and pollution. For pipe lying works, earth excavation, pipe laying and backfill of material including compaction will be implemented. Excavated soil will be temporary stored alongside the trench and refilled after pipe lying. Gravel will be used as a bed for the pipes and excavated soil will be placed back to fill tranche and be compacted. Certain amount soil will surplus due to pipes and gravel in trench.

Surplus excavated soil will be generated during construction of WDFs particularly for construction of water towers and pump stations. Even surplus materials will be used as embankment fill as far as possible certain amount of earth will remain.

The movement of equipment and the temporary storage of materials on the ground during the construction may lead to compaction of the soil. This compaction will take place in the area affected by the construction works, in its vicinity, in the access areas, pipelines, etc.

Gravel and sand will be required for pipe lying and rehabilitation of damaged roads. Unauthorized excavation of such construction materials and improper restoration works on closing used carriers will negatively impact on soil.

Mitigation measures:

To minimize this impact on soil quality the following measures shall be implemented:

- The top soil of about 30 cm depth shall be removed and stored separately during excavation work, and after the construction of the main trunk pipes the same soil shall be replaced on the top, in unpaved areas;
- The excess top soil and earth reminded after construction new WDFs will be used at other project sites or disposed at the places prior approved by local government authorities and The State Committee for Ecology and Environmental protection (Goskomecology);
- To minimize soil compaction, movement of all type techniques will be allowed only through identified assess roads;
- Contractors will be required to use only authorized carriers with getting all necessary permissions per respective national legislation.

Pollution of soil during construction phase maybe caused by improper handling of fuel and oil during refueling and poor waste management which is reviewed in the next chapters.

Waste management

Hazardous wastes

During the construction phase hazardous wastes (used oil and batteries, fuel and bitumen residuals) will be generated from operation and maintenance of machinery. In case of improper handling and dispose of such materials it will lead to pollution of environment and such wastes are hazardous to human health.

Mitigation measures:

- Used oil shall be collected into containers placed at the concreted sites and disposed to national oil companies designated for accepting and treatment of used oils[13];
- Refueling vehicles and oil replacement have to be conducted in the special designated and properly equipped places. Such places have to be organized in the way avoiding releasing or leakage of oil on the ground or water courses. Emergency facilities have to be at the place for elimination of accident of oil spills;
- Used batteries have to be collected separately and transferred to the local branches "Cvetmet" for further disposal.

Non-hazardous wastes

Municipal wastes

Municipal solid wastes and waste waters will be generated at the construction and camp sites. Mainly it will be rubbish, plastic or glass bottles, waste food, organic wastes and etc. Improper wastes management may cause the spread of infectious diseases, emergence of insects and parasites in construction camp sites. In addition, it may lead to pollution of water courses and soil, conflicts with local population.

For disposal of municipal wastes, the Contractor will receive permit on waste disposal from State Committee on Ecology and Environment protection (SCEEP) and will conclude agreements with relevant national agencies on their disposal for whole construction period. All wastes have to be disposed only in the areas indicated into the permits.

Sewage and "grey" water (water from bathroom and canteens) generated at site offices and work camp should be appropriated managed, so it does not produce odors or pollute water courses. There is no centralized sewage system in construction site. Therefore, Contractor is required to provide his own on-site waste water treatment facilities such as septic tanks. For disposal sewage from septic tanks Contractor will have also to get permit from State Committee on Ecology and Environment protection (SCEEP) and conclude agreement with national agency "Toza Hudud". Direct discharge of untreated sewage or oily water in surface water courses will be prohibited.

Construction wastes

Construction wastes generating during the leveling stage will be mainly residuals of plants. There is some probability that stones will be founded during this type of works. All these wastes could be disposed on the municipal landfills indicated by local agency "Toza hudud" which is under State Committee on Ecology and Environmental Protection (SCEEP).

[13] Resolution of Cabinet Ministries of RUz # 258 "On collection, storage and further disposal of used technical oil" dated from 4 September 2012

During the main works, construction of internal and access roads construction wastes will consist of packing materials, welding rods, broken bricks and etc. Therefore, the following mitigation measures need to be applied for whole construction site period.

Mitigation measures:

- Segregate municipal on recyclable and non-recyclable;
- Obtain permit on disposal all types of wastes;
- Sell recyclable wastes to relevant local waste processing organizations (paper, glasses, plastic) and timely dispose of non-recyclable wastes to the landfill, determinate by local hokimiyat;
- Provide hydro isolated septic tank for collecting waste waters at the construction camp sites and bio toilets for workers at the construction sites and timely dispose waste waters to the local waste water treatment plants;
- Prohibit burning of all types of wastes;
- Prohibit discharge of sewage or oily water in surface water courses or soil;
- Create a safe (sheltered with concrete foundation) storage facility for water.

Biological resources

It is expected that during the construction works limited impact on biological resources may occur. Project sites are combination of populated area and agricultural lands represented by typical rural and agro-biocoenosis. There are no natural protected areas or sensitive environmental receptors close to project sites. The nearest natural protection zone – Zomin National Park is located 30 km to South-east from RCA Koshtal, which means no impact on the reservation.

There are no cutting trees planned in the project area. If during the construction period it is revealed that it is necessary to cut down trees and shrubs, then before cutting trees compensation payment will be done as indicated in the RPF for this project.

The project site is located on the rural lands without representatives of wild animals. Nevertheless, burning of the plants' residual during project cleaning stage will be prohibited.

To mitigate adverse impact on vegetation and wildlife and to comply with national requirements the following measures should be apply:

Mitigation measures:

- Clear mark the project site in order to avoid unnecessary felling of trees;
- During land leveling don not use chemical and burning for removing vegetation;
- Don not use chemical and burning for removing vegetation.

Impacts on land use

Impacts on land use was accessed based on Socio-economic Study materials prepared for this project. The feasibility design attempted to minimize the land acquisition and involuntary resettlement. The impacts are categorized as permanent and temporary. The project components which require permanent land acquisition include four ground water distribution

facility (“Well1 WT1”, "Well2", "WT2", "Well3", and "WT3". Total land requirement for acquisition is 0.36 hectares (ha) which includes 0.09 ha of private sector and 0.27 ha hokimiyat reserved lands. This is an estimation based on the technical input received from the engineering team. However, this is still draft and subject to change.

Temporary impacts occur in terms of loss of crops during the construction of pipe lines especially the transmission mains and distribution mains which pass along the rural roads. The roads will be restored to the previous use post the construction and the users will be allowed to use it.

Totally 1.834 hectares of land is likely to be impacted temporarily due to construction of transmission main and supply main pipelines.

Socio-economic resources

Only minimal impacts on land use are expected, since sites are typically located on lands not used for any other purpose or in built-up areas. However, the contractor will produce a plan showing the impacts of pipe-laying affecting some utilities and/or trees established within the road allowances, which will be coordinated and in conformance with the land and resettlement framework.

Any temporary loss of access to houses and business will as far as possible be mitigated by establishing temporary access routes to affected households and businesses, especially when risk of economical impact to businesses due to lack of access for customers is identified or foreseen.

The project activities will have no adverse environmental impacts and the minor impacts that will arise during especially the construction phase, and which will be mitigated by the ESMP requirements, will not affect particular vulnerable groups disproportionately.

Mitigation measures:

- inform community in advance about planning works;
- for construction works which do not require specific skills, hire local population as much as possible;
- If cutting trees is unavoidable, to compensate losses as indicated in the RPF for this project and in cost for trees.
- conduct explanatory work among workers about the local culture and traditions;
- Any accidental or unanticipated impacts that could not be identified during preparation stage of the project will be fully restored and/or compensated by the Contractor. This provision will be included in the contract for civil works and budgeted for by the contractor.

Health and safety issues

Besides impacts on air, water and soil quality, described in previous chapters, certain risks related to community health and safety, for workers in campsites may occur during construction phase.

For community

Inadequate lighting and fencing of construction sites inside of settlement areas can be dangerous for pedestrians and vehicles especially during the night time. Increasing of traffic

due to trucks and vehicles movements to construction sites, temporary closing of roads during construction of access roads may cause inconvenience for local population as well.

Untimely and inefficient disposal of solid waste and improper sanitary conditions generated by the construction workers at construction sites and labor camps may cause pollution of the surrounding environment and affect on the health of local people. There also could be some social problems due to irresponsible behavior of the outside work force such as gambling, alcoholism and disrespect to local people and their culture.

Cultural interference workers with local communities may cause HIV and sexually communicable diseases (STD) spreading in case of law awareness about these diseases among workers and community.

The following measures need to be undertaken to minimize this impacts:

Mitigation measures:

- Inform population of the RCA Koshtal about planning works in advance;
- Together with traffic police authority of RCA Koshtal Contractor should develop a Traffic Management Plans with clear indication routes of vehicles' movements, placement of special signs, and speeding allowance. The Traffic Management Plan has to be approved by RCA Koshtal and disclosed to local community prior commencement of construction works on respective sites;
- Provide proper lightening of construction site;
- Development of Site Specific Plans for campsites;
- Carry out regular awareness campaigns among work staff, including specific hazards associated with the spread of HIV/AIDS;
- After completion of the construction works reinstate construction and camp sites by bringing them to its primary condition;
- PSC will conduct a post-construction audit during a defect liability period to make sure that construction sites and camps are properly cleaned and restored before hand-over to Executive agency – Ministry of Economy Development and Poverty Reduction.

For workers

Separate Site Specific ESMP (SSESMP) for labor/construction camps will be developed by Contractors, endorsed by PSC and approved by the Environmental Specialist of PIU prior commencement of works. SSESMP for labor/construction camps will describe waste collection and disposal procedure, set up of camp facilities (such as a storage place for construction materials and techniques if any, laundry and toilets, access roads) in the way, which will allow to minimize impacts on environment and disturbance of local population. Labor camps have to provide safe and adequate living conditions for workers, such as dining rooms, toilets, shower rooms emergency medical kits. Other measures for fire-fighting and preventing electric shocks etc. need to be organized in accordance with national standards.

The Contractors will require to develop Occupation Safety and Health Plan, which covers among others the following topics: usage of Personal Protection Equipment's (PPE), working procedure in dangerous conditions (works at height, with noise equipment and etc.), training activities and others.

Impact assessment due to COVID-19

The projects' construction/civil works will involve work force, together with suppliers and supporting functions and services. The work force may comprise workers from national, regional, and local labor markets. They may need to live in on-site accommodation, lodge within communities close to work sites or return to their homes after work. There may be different contractors permanently present on site, carrying out different activities, each with their own dedicated workers. Supply chains may involve international, regional and national suppliers facilitating the regular flow of goods and services to the project (including supplies essential to the project such as fuel, and water). As such there will also be regular flow of parties entering and exiting the site; support services, such as catering, cleaning services, equipment, material and supply deliveries, and specialist sub-contractors, brought in to deliver specific elements of the works.

Given the complexity and the concentrated number of workers, the potential for the spread of infectious disease in projects involving construction is serious, as are the implications of such a spread. Projects may experience large numbers of the work force becoming ill, which will strain the project's health facilities, have implications for local emergency and health services and may jeopardize the progress of the construction work and the schedule of the project. Such impacts will be exacerbated where a work force is large and/or the project is in remote or under-serviced areas. In such circumstances, relationships with the community can be strained or difficult and conflict can arise, particularly if people feel they are being exposed to disease by the project or are having to compete for scarce resources. The project must also exercise appropriate precautions against introducing the infection to local communities.

The GoU has adopted the special procedure on acting in conditions of pandemic - the Temporary Sanitarian Norms and Rules (SanN&R) # 0372-20 "On organization of performance of state agencies and other organizations, commercial entities in limited measures condition due to pandemic COVID-19». The document was approved by the Agency on Sanitarian Epidemiological Well-Being (3rd edition), May 11, 2020. The SanN&R provides general requirements and specific requirements for different sectors: pharmacy, public transport, markets, construction sites and etc.

According to SanN&R, the managers of organizations are personally responsible for compliance with the SanN&R. All works have to be organized in order to ensure:

- preventing the introduction of infection into the organization;
- taking measures to prevent the spread of coronavirus infection (COVID-19) in teams in organizations;
- implementation of organizational and technical measures to prevent infection of workers;
- other organizational measures to prevent infection of workers.

The rules present requirements for safe transportation workers, organizing medical examination at the entrance points, provision with disinfection equipment and disinfectants, catering facilities, construction camps, etc. Also, SanN&R describes requirements on organizing an isolator in medical centers (if any) in case if patient is identified with a high fever or with individual symptoms of an acute respiratory viral infection (lack of smell, dry cough, malaise, etc.) and isolating him from the work team.

All managers have to conduct introductory training for new workers and routine training for working staff. The rules provide an action plan for cases when workers with COVID-19 symptoms.

Section 5.1.4 of SanN&R provides specific norms for construction sites. The section pays special attention to dust and provides recommendation for dust generation mitigation and protection. The rules provide a list of Personal Protection Equipment for COVID-19.

The document also provides instruction on communication with local health care institutions for organizing regular medical examination of workers and mobilization in case of identification infections.

Mitigation measures

- In conditions of pandemic risk organize works in accordance with Temporary Sanitarian Norms and Rules (SanN&R) # 0372-20;
- Ensure proper recording and reporting of any cases of infection and undertaken actions.

Cultural heritage

The land and vegetation clearing, earthmoving activities during the construction of the new WDUs and extension of existing ones, pipelaying works may affect the archaeological heritage in the project areas. Near to the project no Cultural Heritage Objects, therefore on impact on Cultural Heritage.

Nevertheless, there is still possibility that some artifacts could be found during digging of foundation pits. For that case, the following mitigation measures will be undertaken in accordance with the procedure indicated in the Law of RUz "On Protection and Use of Objectives of the Archeological Heritages" (2009). Procedure on chance finds procedure is presented in Annex 5.

Mitigation measures:

- Excavation and other works need to be suspended immediately;
- Area with possible heritage shall be fenced with fencing tape;
- A designated focal point from a local administration (khokimiyat) and representative of Ministry of Culture of RUz need to be informed and invited for assessment of potential heritage and undertaken necessary actions;
- Civil works at the finding place could be recommenced after obtaining permission from the representative of Ministry of Culture of RUz and from focal point from Khokimiyats.

6.3 Operation stage

Impact on the air

No permanent impact on air is expecting during operation phase. Some temporary impact may occur during maintenance works.

Mitigation measures

- Watering of earth during maintenance works
- Immediately replacing defective equipment and removing it from the work site;
- No truck movements in inhabited areas between 22:00 and 6:00.

Impact on water

Extensive pumping of ground water from wellfield may impact on ground water level and it may lead to depletion of ground water reserve. A hydrogeological assessment provided by the State Committee on Geology and Mineral Resources establishes a maximal amount of water which could be withdrawn from wellfield without impact on water balance between ground and surface water.

Mitigation measures

- The quality of water supplied for household and drinking needs must comply with the requirements of GOST 2874-82 or regulatory documents of the Republic of Uzbekistan that determine the quality of drinking water.
- When storing water used for household and drinking needs, reagents, internal anti-corrosion coatings, as well as filtering materials that meet the requirements of the sanitary and epidemiological department of the Ministry of Health of the Republic of Uzbekistan should be used for use in the practice of household and drinking water supply.
- After the commissioning of this facility, it is necessary to ensure the proper and efficient use of water resources and to prevent water losses and leaks and excessive water consumption - installation, operation and periodic checking of water meters at water users;
- Conduct awareness program among population to ensure the sustainable operation of the constructed water supply system.

Soil quality

The main possible impact on soil during the project operation is risk related to land subsidence in case of excessive extraction of ground water at the wells in RCA Koshtal territory. To avoid such situation, water from wells has to be pumped strictly in the amount, indicated in the design documents and permission for special water use. Water Suppy Operation Company will have to obtain the permission from State Committee on Ecology and Environment Protection (Goskomecology).

Mitigation measures:

- The top soil of about 30 cm depth shall be removed and stored separately during excavation work, and after the construction of the main trunk pipes the same soil shall be replaced on the top, in unpaved areas;
- The excess top soil and earth reminded after construction new WDFs will be used at other project sites or disposed at the places prior approved by local government authorities and The State Committee for Ecology and Environmental protection (Goskomecology);
- To minimize soil compaction, movement of all type techniques will be allowed only through identified assess roads;
- Contractors will be required to use only authorized carriers with getting all necessary permissions per respective national legislation.

7 ANALYSIS OF ALTERNATIVES

7.1 "Zero option"

Refusal from the planned activities for the implementation of the Working Project “Construction of Water Supply in Koshtal Rural Citizens' Assemblies of Zomin district of Jizzak region” while maintaining the existing state of water supply for RCA Koshtal will entail a shortage in household drinking water. Thus, the overall environmental situation in the region will deteriorate and the socio-economic damage will increase.

Therefore, as a result of a comprehensive consideration of the issue of water supply for this RCA, a choice was made of a technological solution for the construction of a water supply system and is considered optimal for solving the task.

It is planned to reduce water losses to a minimum level through the use of the latest equipment.

The implementation of the design solutions outlined in this Working Project will allow the uninterrupted supply of potable water and in the required amount to the population of the RCA Koshtal, improve the sanitary and ecological situation in the project region.

7.2 Project Alternative

To disinfect water after wells, a house is being built. The DUV - 1A500-NMST bactericidal installation is installed inside the task.

Ultraviolet radiation has a high efficiency - 99.9% against a wide range of microorganisms: bacteria, viruses, spores, and parasitic protozoa, including their chlorine-resistant forms. UV radiation destroys pathogens of infectious diseases such as typhoid, cholera, dysentery, salmonellosis, typhoid fever, viral hepatitis, etc.

The UV water disinfection method is safe. Unlike oxidizing technologies (chlorination, ozonation), after exposure to ultraviolet radiation, harmful organic compounds are not formed in water, even if the required dose is repeatedly exceeded. The absence of the risk of overdose simplifies the operation of the equipment. The use of UV disinfection can reduce the amount of chlorine used by up to 5 times and minimize the negative impact of by-products of reagent methods on human health.

Ultraviolet acts only on microorganisms practically instantly (3-10 seconds) and does not change the chemical composition and physical properties of water.

In DUV-N UV systems, the UV source is an amalgam lamp. The amalgam lamp does not contain liquid mercury, which guarantees its safe use and easy lamp disposal.

8 INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

One of the main goals of the ESIA is to facilitate the participation of all stakeholders and local communities at all stages of the project cycle: from the pre-construction phase and construction activities to its operation. In this regards, a consultation was held in the project district to capture the stakeholders' opinions about the project, and agree on the project activities.

Prior to the public consultation several meetings were conducted with internal and external stakeholders, such as representatives of the provincial and districts level committee on Ecology and Environment Protection, district Khokimiyats and makhallas, land cadaster committee, district water supply agency (Suvoqova) and district energy entities.

Public consultation (PC) was conducted on December 4, 2021 at the Conference Room of the RCA Koshtal Zomin district. Due to the Covid-19 Quarantine restrictions consultations were carried out in accordance with the national sanitary norms and regulations[14]. Representatives of the settlements Koshtal, representatives of local administration, design company participated the meeting. PC participants were introduced with project's main features, results of environmental assessment and preliminary results of finding in term of resettlements issues and planning activities. The consultant introduced Grievance Redress Mechanism and WB requirements on public disclosure process.

The participants were explained that the project currently on the detail design stage. If any changes in the project design will take place, the environmental assessment will be revised per new circumstances and new round of public consultation will be conducted with affected people.

During the PC people were requested to give their opinions and suggestions. In addition, participants were provided with contact information of PIU environmental specialist for further suggestions and questions.

The stakeholders and consultation participants were informed that Contractor would install an informative banner with information on project objectives, activities, implementers, schedule of construction works, deadlines, contact information and logbooks for complaints and suggestions on each construction site.

Among 32 participants from Koshtal settlement surrounding the project site, 8 were females. The main issues raised during the public consultation in regards environmental issues are presented in the Table 14:

Table 14. Issues Raised During Public Consultation

#	Issues raised	Answer provided
1	Residents live almost without water. Many people carry water home in buckets. But even in the column, on the street, sometimes there is no water. Is it possible to start construction as quickly as possible?	Construction will begin around April. We are trying to speed up the process.

[14] Temporary Sanitarian Norms and Rules (SanN&R) # 0372-20 "On organization of performance of state agencies and other organizations, commercial entities in limited measures condition due to pandemic COVID-19»

#	Issues raised	Answer provided
2	You told us that the power grid will still be installed. Will these construction projects run in parallel?	Yes, we will try to keep them running in parallel.
3	If the roads are damaged during the construction of the water pipe. Who will restore them?	Any impact on the social infrastructure of local communities will be restored to their pre-design state. Contractor will rehabilitate local communities or other institution responsible for maintaining any social infrastructure affected.
4	If the trees are demolished. Will there be compensation?	No impact on trees was identified during the work on the subproject. The project provides for compensation in the event of loss of wood from trees, compensation will be based on the market value of the dry volume of wood from the affected tree. Compensation for trees will be exempt from deducting the value of timber left behind by PAPs. Fruit trees will be reimbursed at a replacement cost equivalent to the average annual net income over the last three years plus input costs multiplied by 4 times (years) to reflect the duration from planting to production stage. The trees that are not yet bearing fruit will be compensated at the replacement cost, which is equivalent to the net profit for 1 year.

The participants noted the importance and high expectations from this project as the local residents of RCA Koshtal will be provided with water for household, drinking and domestic needs, which they currently do not have.

This ESIA incorporates comments and suggestions from all concerned stakeholders. The final IEE report will be made available on local language on RIDP official website and in English on WB's website.

As part of information disclosure, the final version of ESIA will be translated into local language and will be delivered to local communities and relevant authorities (hokimiyats). The final ESIA report will be sent to Ecology and Environment Protection Committee in Jizzak region for further use during the construction and operation phases.

Future consultations for project stakeholders shall follow as mentioned below.

(i) During detailed design stage, in case of any major changes in the design/alignment/location, the ESIA will be updated accordingly. The PSC will hold at least one public consultation meeting at early stages to solicit perceived impacts, issues, concerns and recommendations from affected communities.

(ii) Prior to construction, the PSC will conduct an intensive information, education and communication campaign (IEC) to ensure the sufficient level of awareness/information among the affected communities regarding the upcoming construction, its anticipated impacts, the grievance redress mechanism, contact details and location of the PSC, and status of compliance with the Government's environmental safeguard requirements. Among others, the information banners containing information about the subproject, implementation schedule and contact

details of the executing agency and Contractors will be installed at the strategic locations within the subprojects' main areas of intervention. The grievance redress procedure and details will be posted at the offices of the district branches of PSC, PIU and district hokimiyat.

9 GRIEVANCE REDRESS MECHANISM

9.1 General concepts of GRM

Transparency and accountability should be fundamental principles of the project and subprojects. To this end, the project should establish a grievance mechanism (GRM) that is accessible to all, including different ethnic, religious, gender and other special groups. The mechanism aims not only at receiving and recording complaints, but also at how they are resolved. An awareness campaign and training should be conducted in support of GRM. Despite the fact that feedback should be considered at the level closest to the complaint, all complaints should be registered centrally and follow basic procedures.

399. The grievance mechanism is the process of receiving, assessing and reviewing project-related grievances from affected communities at the project and sub-project levels. Project/sub-project impacts include involuntary resettlement, construction impacts, limited access to infrastructure, environmental and social impacts and others. The purpose of GRM is also to enhance accountability to project beneficiaries and to provide channels for feedback to project stakeholders on project activities. This mechanism allows for the identification and resolution of issues affecting the project, including: complaints regarding security measures, staff misconduct, misuse of funds, abuse of power and other misconduct. By increasing transparency and accountability, GRM aims to reduce the risk that the project/sub-projects will unintentionally harm citizens/beneficiaries and serves as an important feedback mechanism to improve the impact of the project.

The Grievance Redress Mechanism. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to the project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). Project specific GRM is developed drawing up the existing complain handling mechanism and encompasses establishing external committees at different levels to redress the grievances.

Grievance Redressal Committee (GRC) will be established at four-levels, one at Mahalla level and the others at district, region, and PIU to receive, evaluate and facilitate the resolution of displaced persons concerns, complaints and grievances. The GRC will provide an opportunity to the local people to have their grievances redressed prior to approaching the State Authority. The GRC is aimed to provide a trusted way to voice and resolve concerns linked to the project, and to be an effective way to address aggrieved person's concerns without allowing it to escalate resulting in delays in project implementation.

The GRC will aim to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project. The GRC is not intended to bypass the government's inbuilt redressal process, nor the provisions of the statute, but rather it is intended to address displaced persons concerns and complaints promptly, making it readily accessible to all segments of the displaced persons and is scaled to the risks and impacts of the project.

The GRC will continue to function, for the benefit of the Project Affected Persons (PAP)s during the entire life of the project including the defects liability periods. The response time prescribed for the GRCs would be three weeks. Since the entire resettlement component of the project has to be completed before the construction starts, the GRC, at Mahalla and District will meet at least once in three weeks to resolve the pending grievances. Other than disputes relating to ownership rights and apportionment issues on which the State has jurisdiction, GRC will review grievances involving all resettlement benefits, relocation and payment of assistances.

The Facilitating Partner (NGO) will assist the impacted persons in registering their grievances and being heard. The complaint / grievance will be redressed in 3 weeks time and written communication will be sent to the complainant. A complaint register will be maintained at Mahalla/ District/ PIU level with details of complaint lodged, date of personal hearing, action taken, and date of communication sent to complainant. If the complainant is still not satisfied s/he can approach the jurisdictional State Authority. The complainant can access the appropriate Authority at any time and not necessarily go through the GRC.

Table 15. GRM at different levels

Level	Discription
PIU at MoED	PIU will set up a separate "hotline" telephone number to receive phone calls from citizens on queries, complaints, feedback, proposals etc. PIU will have to have e-registry of all calls specifying date of call, topic and if the issue was resolved during conversation or needs follow up measures. Anonymous calls/written queries should be received Google drive and/or other platforms should be used to back up files PIU will use e-system (for ex Germes, etc) to register written complaints and queries System should have information on date of receiving query / sending reply; topic of query; outcome of query. MIS will be set up that will have integrated GRM, specifically: Receive feedback / complaints/ proposals from any citizen Description of grievance redress handling procedure with timelines and appeal procedure System must have technical feature to sendautomatic confirmation to citizen that his query is well received with describing graveness handling procedure with timelines All queries and complaints should be automatically backed upwith dates of receiving/reply/outcome and technical feature to download this data in Excel file to use for reporting Public awareness/information products both on project and GRM should be available on MIS for downloading PIU will have establish internal communication mechanism with Ministry of Employment and Labor Relations on labor related issues. GRM/MIS/Social Safeguards specialist will be in charge of building communication channels with MoELR for timely sharing any complaint/query received on labor issues and providing response back to citizen. Brief information on project and project GRM intake channels will be pinned at MoED's web page and social networks
Regional Level	At the regional level, the regional hokim shall assign or establish a team responsible for handling grievances. The PIU regional SS should be part of the team, as should be a representative of the United Customer Services entity that is responsible for Procurement of subgrants (Component 1a). The PIU SS based in Tashkent will provide oversight to make sure that the regional level teams/committees are functioning properly, and that grievances that cannot be addresses are escalated to Tashkent.
District implementation team	At the district level, ultimate authority resides with the hokim. S/he will establish a team/committee (or assign an existing body) as responsible for handling grievances. The team could include representatives of the FP as resources persons to support follow up given that there will not be any PIU staff hired at the district level. That said the PIU SS at the regional level

	should provide oversight that the grievances are being redressed, and report up if they are not. District implementation team will install box at the office of district Hokimiyat to collect any written grievances and queries from citizens. Facilitating Partner will check this box once every 2 weeks and will forward it to PIU either through regional PIU representatives or through MIS. All district Hokimiyats covered by project will have public awareness/information products both on project and GRM provided by PIU that could be placed in easily accessible area for citizens at the office of Hokimiyat.
MDU	At the village level, a grievance redress focal point should be identified as part of the MDU established with support of the FPs. MDU will install **box at the office of MCA** to collect any written grievances and queries from citizens. Facilitating Partner and/or MCA project committee's chair will check this box once every 2 weeks and will forward it to PIU either through regional PIU representatives or through MIS. **All MCAs offices covered by project will have public awareness/information products both on project and GRM** provided by PIU that could be placed in easily accessible area for citizens at the office of MCA.

9.2 Deadlines for handling complaints

Depending on the severity of the impact or damage suffered by the PAP, complaints/appeals to the PIU may be dealt with at different times. Complaints/appeals that do not require expert opinion can be considered within 15 days, with mandatory notification to the complainant. In other cases, where the complaint/appeal requires a thorough investigation with the involvement of specialists, the time limit for consideration of the complaint may be 30 days with mandatory notification to the complainant.

9.3 GRM special conditions

The grievance mechanism specifically addresses the issue of resettlement, compensation and land acquisition. PAP will have the right to file complaints and requests for any aspect of compensation for land acquisition and resettlement. The PIU will ensure timely and satisfactory resolution of complaints and grievances on any aspect of land acquisition, compensation and resettlement. PAP is well placed to resolve its grievances at the project level. As part of the proposed project-level grievance mechanism, affected households may appeal any decision, practice or activity related to the valuation or valuation of land or other assets, acquisition and compensation. Grievances may arise from members of communities who are dissatisfied with:

a) the eligibility criteria,

b) community planning measures,

c) actual implementation,

d) ecologic issues.

The GRM for the current project takes into account the national legislation, the specificity of the project sites and results of public consultations. According to the Resolution 97 (29 May 2006) the Hokimiyats of the respective districts are obliged to notify owners of residential, production and other buildings, constructions and plantings on the made decision in writing for

signature not later than six months prior to demolition, attaching to the notice copies of the relevant decisions of the hokims of districts and regions on the basis of the decision of the Cabinet of Ministers of the Republic of Uzbekistan on any land acquisition, demolition of residential, production and other buildings, constructions and plantings located in the land.

The World Bank's Community Grievance Service. Individuals who believe they are being adversely affected by a World Bank (WB)-supported project have the right to refer complaints through existing project level grievance mechanisms or through the WB Grievance Service (GS). GS ensures that complaints received to resolve project-related issues are addressed immediately. Project affected communities and individuals have the right to submit complaints to the independent WB Inspection Panel, which determines whether or not compliance with WB policies and procedures has caused or could cause harm. Complaints may be filed at any time after concerns have been brought to the attention of the World Bank and the Bank's management has been given the opportunity to respond to such a complaint. For procedures for filing complaints with the World Bank's Grievance Service (GS), please go to the following link: http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service To see how to file a complaint with the World Bank Inspection Commission, please go to the following link: www.inspectionpanel.org

The PIU should provide information on the scope of GRM, eligibility criteria for filing a complaint, the complaint procedure (where, when and how), the investigation process, the timeframe for receiving a response to complaints, and the principle of confidentiality and the right to file anonymous complaints. Information on the grievance processing system should be disseminated to all beneficiaries and persons affected by the project through regular information channels used by the project, including through meetings at the beginning of the project, public hearings on resettlement, public meetings during project implementation, brochures in local languages, posting on notice boards and on the Internet, and information as part of training activities carried out by the project.

Periodic public information campaigns should encourage the use of GRM and publish information on complaints received and resolved. Campaigns will use local media (e.g. television, newspapers, radio). In organizing and conducting these campaigns, special efforts should be made to communicate information to socially vulnerable groups. Periodic public information campaigns should encourage the use of GRM and publish information on complaints received and resolved. Campaigns will use local media (e.g. television, newspapers, radio). In organizing and conducting these campaigns, special efforts should be made to communicate information to socially vulnerable groups.

10 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The Environmental and Social Management Plan (ESMP) compiles the comprehensive information gathering a summary of impacts previously identified, the actions required to mitigate those impacts in accordance with the laws of the Republic of Uzbekistan and the ADB safeguard policy; and the monitoring activities that are to be undertaken as part of the project in order to confirm that they have been effective in reaching their objectives.

The ESMP also details the institutional arrangements and capacities that currently exist, or that will be put in place during project implementation, to ensure that the ESIA (including the ESMP) has (i) comprehensively considered both national and WB requirements for environmental protection, (ii) identified all likely environmental and social impacts, (iii) proposed appropriate mitigation measures, and (iv) put in place the necessary systems to ensure that effective procedures for environmental monitoring and control of the project impacts, and mitigation measures are implemented throughout the life of the project.

10.1 Environmental and Social Mitigation measures

Mitigation measures required to address the impacts identified by this ESIA have been consolidated in the following ESMP (Table 16). The table provides information on anticipated impacts during the pre-construction, construction and operation phases with proposing mitigation measures, defining responsible party for their implementation. It is considered that ESS Specialist from PIU's, Environmental Specialist of PMC and Environmental Specialist or designated staff from Contractors will be responsible people for ESMP implementation.

Table 16. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Impact	Mitigation measure	Responsibility	Cost
Pre-construction stage			
Project design	• During detail design stage layout WDFs, route of main trunk and water distribution networks will be updated with consideration of minimization of impact on environment and population during construction and operation phases; • Ensure that first sanitarian zone (within 30 meters from the longest well) for ground water intakes is in compliance with national standards ShNK 2.04.02-19 “Water supply. External networks and facilities” (1997) and the territory is properly fenced;	PMC develops detail design PCU monitor compliance	No cost required
Lack of proper environmental requirements	• Ensure that ESMP is included in bidding documents. • Ensure that environmental and social covenants, tools for resolving issues with Contractors non-compliance with established requirements are included in the bidding documents (such as penalties for violence environmental requirements and etc.) and further in contracts. • Include list of required national approval and licenses (indicated in chapter 1, Table 1) are included in the bidding documents and responsible for receiving such permission are identified.	PCU, PMC’s Environmental Specialist	No cost required
Improper assessment of bidders’ environmental capacity	• IA with assisting Project Management Consultant’s (PMC) environmental specialist will ensure inclusion of environmental provision along with ESMP in the bidding documents and in contracts for Contractors; • Bids evaluation needs to be done with consideration of: capacity of bidders to meet EMSPs requirements, proposing adequate budget efficient for implementation ESMP, existence of good practice in environmental performance within other similar projects;	CSA, PCU	No cost required
Non-compliance with national environmental legislation in term of conduction environmental impact assessment and required permission	• Prepare ZVOS and submit it to Provincial Committee for Ecology and Environmental protection (Goskomecology) for revision and approval. • Include the requirements indicated in EA into the final ESMP.	Water Supply Operating Company (WSOC)	Will be founded WSOC budget
Generation of different potential	• If any changes in the project design will take place, the ESIA has to be updated accordingly.	WSOC, PCU with PMC	Included in PMC contract

Impact	Mitigation measure	Responsibility	Cost
environmental impacts due to changes in design, layout			
Non-compliance with national and international requirements during conduction bidding for purchase machinery and mechanisms	• Goods procured for project implementation will be done in compliance with IFC Exception List (Project Negative/ Exclusion List) set forth at Appendix 7 of the Project ESMF Document; • Environmental specifications have to be included in bidding packages for purchase machinery within the project. Particularly, toxic level of machinery must meet "Euro 3" environmental requirements as defined by national regulations[15];		
Improper SEMP and SSEMP development	• Within 30 days after contract award and prior to commencing any physical works, Site-specific Environmental and Social Management plan (SSESMP) will be developed by the Contractors under the guidance of the PMC, and be endorsed by PMC before submission to PIU for approval; • In addition to SSESMP, Topic Specific SEMPs need to be prepared by Contractors, endorsed by PMC and approved by PIU for the following activities: Traffic Management Plan for construction of distribution network within settlements, Waste management Plan for sites with demolishing works, Hazardous Wastes Management Plans as described in the next sub-sections, Construction Camps Management Plan and Occupational Health and Safety Plan (OHS Plan);	Contractors develop SSEMP PMC review and endorses PIU approve	Included in the Contractors budget
Construction stage			
Air pollution	• Apply watering of construction sites and roads inside settlements during dry season; • Cover transported bulk materials; • Control speed limitation for vehicles during movement inside of settlements - no more than 40 km/h;	Contractors implement PIU and PMC monitor implementation	Included in the Contractors budget

[15] Resolution of President of RUz "On measures for further development of production at the Samarkand automobile plant and renewal automobile park", dated from December 14, 2006

Impact	Mitigation measure	Responsibility	Cost
	• All vehicles and techniques must comply with technical requirements and have to pass regular inspection as indicated into the national standards[16]; • Prohibit open burning of solid wastes generated particularly from labor camps and construction activities; • Clean wheels and under carriage of haul trucks prior to leaving construction site; • Restrict demolition activities during period of the high winds or under more stabile conditions when winds could nevertheless direct dust towards adjacent communities; • Conduct monitoring of dust level in front of settlements located close to constructed WDFs. In case of exceeding standards for dust level for this area (0.15 mg/m^3)[17] additional mitigation measures for dust control need to be undertaken – more often watering or installation of dust screen; • Pipe lying works in street with width less than 2 meters, needs to be conducted manually.		
Noise and vibration	• Install acoustic barrier next to the WDFs, "Well No1 Water tower No1"; • For the rest of WDFs acoustic screens have to be used if construction activities will be implemented closer than 100 m; • If noise level in front of houses near to WDFs Well 2, Well3, WT2 and WT3 increases 68 dB during the day time, install acoustic screen; • During construction period establish limits on speed for vehicles inside of settlements (40 km/h); • Operation of heavy equipment shall be conducted between 7 am and 7 pm only, limitation on speed for vehicles; • In case of receiving any complaints from population, noise measurements need to be conducted and in case of exceeding established standards, additional mitigation actions for decreasing noise level need to be undertaken (establishing temporary sound absorbing barriers and others); • Schedule construction so as to minimize the multiple use of the most noisy equipment near sensitive receivers (living houses or school);	Contractors implement PIU and PMC monitor implementation	Included in the Contractors budget

[16] "O'z DSt 1057:2004 Vehicles. Safety requirements for technical conditions" and "O'z DSt 1058:2004 Vehicles. Technical inspection. Method of control".
[17] SanR&N RUz No.0179-04 Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the Republic of Uzbekistan including Annex 1

Impact	Mitigation measure	Responsibility	Cost
	• Use of Personal Protective Equipment (PPE) by workers involving in demolishing and construction works in conditions of increased noise level (more than 80dB) is mandatory; • Conduct weekly noise measurements at the all WDFs. Make sure that noise level not exceed 55 dB during the day time; • During pipe lying works in the site where digging of tranche will be implemented closer than 2 meters to the wall use compact less noisier pipe lying techniques; • Inform population about anticipated works.		
Pollution of surface and ground water	• Construction and labor camps, including storage places for lubricant, fuel and other oils will be located 100 m away from water bodies; • Conduction of refueling, oil replacement or repairing works will be banded at the area within 50 m from water streams; • Sanitary water and solid wastes will not be released directly into water streams; • Topsoil stripped material shall not be stored where natural drainage will be disrupted; • Water samples will be taken and compared with the baseline monitoring results obtained in the preconstruction stage. Location of monitoring points, frequency and monitoring substances are presented in Environmental Monitoring Plan (Chapter 10.2) • All works related to digging on the depth more than 2 meters need to be conducted during non-irrigation season. The irrigation season in that region is May-August. • If this period could not be avoided, use standards technology for construction in areas with high water logging: pumping water into the nearest drainage canal. • Conduct monitoring of water quality in the hand pumps houses located close to the rehabilitating or constructing new WDFs needs to be undertaken by Contractor on the monthly base (Chapter 10.2, ESMP). In case of exceeding standards, ground water pollution source(s) need to be identified and repaired.	Contractors implement PIU and PMC monitor implementation	Included in the Contractors budget
Soil contamination	• The top soil of about 30 cm depth shall be removed and stored separately during excavation work, and after the construction of the main trunk the same soil shall be replaced on the top, in unpaved areas; • • The excess top soil and earth reminded after construction new WDFs will be used at other project sites or disposed at the places prior approved by local	Contractors implement	Included in the Contractors budget

Impact	Mitigation measure	Responsibility	Cost
	government authorities and The State Committee for Ecology and Environmental protection (Goskomecology); • To minimize soil compaction, movement of all type techniques will be allowed only through identified assess roads; • Contractors will be required to use only authorized carriers with getting all necessary permissions per respective national legislation.	PIU and PMC monitor implementation	
Hazardous materials	• Used oil shall be collected into containers placed at the concreted sites and disposed to national oil company designated for accepting and treatment of used oils; • Refueling vehicles and replacement oils also have to be conducted in special designated and properly equipped places. Emergency facilities have to be at the place for elimination of accident of oil spills. • Used batteries have to be collected separately and transferred to the local branches “Cvetmet” for further disposal.	Contractors implement PIU and PMC monitor implementation	Included in the Contractors budget
Non-hazardous materials	• Segregation of wastes on recyclable and non-recyclable wastes; • Selling recyclable wastes to relevant organizations (paper, scraps, accumulators) and timely disposal of non-recyclable wastes to the landfill, determinate by local hokimyat. • Providing hydro isolated septic tank for collecting waste waters at the camp sites and bio toilets for workers at the construction sites and timely disposal of waste waters to the local waste water treatment plants. • Burning of waste on any construction site is forbidden with the exception of stub and small branches from felled trees and bushes, which is better to be burned in order to avoid pest dissemination; • Prohibit discharge of sewage or oily water in surface water courses or soil; • Create a safe (sheltered with concrete foundation) storage facility for water.	Contractors implement PIU and PMC monitor implementation	Included in the Contractors budget
Losses of assets, trees and crops	• Site cleaning for extension existing and construction new WDFs should be done exactly within marked area. • If impact to any private or public assets is required during the construction, the contractor will inform affected households in advance, fully restore or reimburse losses as agreed with affected persons, and maintain records including visual records of the pre-and post-project state of land and assets; • If cutting trees is unavoidable, to compensate losses as indicated in the RPF for this project; • Do not use chemicals or burning for removal of vegetation; • Greening of WDFs as part of the project design.	Contractors implement PIU and PMC monitor implementation	Included in the Contractors budget

Impact	Mitigation measure	Responsibility	Cost
Socio-economic resources	• Inform community in advance about planning works; • For construction works which do not require specific skills, hire local population as much as possible; • Conduct explanatory work among workers about the local culture and traditions; • Any resettlement impacts that cannot be identified at preparation stage (i.e., are accidental or concern temporary access) will be fully restored and/or compensated by the Contractor.	Contractors implement PIU and PMC monitor implementation	No cost required
Health and safety issues	• Contractor and PIU will inform population about anticipated works in the settlement in advance; • Contractors will require to develop a Traffic Management Plans with clear indication routes of vehicles' movements, placement special signs, and speeding allowance inside of the settlements and schedule transportation activities by avoiding peak traffic periods; • The Traffic Management Plans will be approved by Traffic Police and disclosed to local communities prior commencement of construction works on respective sites; • Clear signs will be placed at construction sites in view of the public, warning people of potential dangers such as moving vehicles, hazardous materials, excavations etc. and raising awareness on safety issues. • Contractor will ensure safe access to all sidewalks, houses, public buildings etc. throughout the time of construction; • Contractor will fully restore or improve all sidewalks, entrances, and points of access to buildings; • Contractor will sequence works so as to cause minimal disturbance to residents; • All construction sites will be properly lightened and fenced; • Development of Site Specific Plans for campsites; • After completion works all roads shall be rehabilitated at least up to condition of pre-construction stage. • Development Occupation Safety and Health Plan, which covers among others the following topics: usage of PPE, working procedure with hazardous materials (such as asbestos materials, PCBs etc.), training activities and others. The workers have to be provided with appropriate living conditions: safe water supply, washing conditions.	Contractors implement PIU and PMC monitor implementation	Included in the Contractors budget

Impact	Mitigation measure	Responsibility	Cost
	• Comply with requirements of Labor Code of Uzbekistan (1998) and standards on work and health safety34; • Ensure that all site personnel have a regular E&S training and basic level of environmental awareness training; • Ensuring all workers are provided with and required to use personal		
Construction camps	• Development of Separate Site Specific ESMP for labor/construction camps (or part of general SSESMP). • SSESMP for labor/construction camps will describe waste collection and disposal procedure, set up of camp facilities (such as a storage place for construction materials and techniques if any, laundry and toilets, access roads). • If washing equipment and vehicle is planning to be conducted at the labor/construction camp's site, appropriate wastewater treatment facilities have to be organized on the camp and respective permissions on water intake and waste water disposal need to be received by Contractor from Goskomecology • Provide safe and adequate living conditions for workers, such as dining rooms, toilets, shower rooms etc. • Contractors shall instruct all the workers to act in a responsible manner after completion works, construction camps.	Contractors implement PIU and PMC monitor implementation	Included in the Contractors budget
Impact due to COVID-19	• In conditions of pandemic risk organize works in accordance with Temporary Sanitarian Norms and Rules (SanN&R) # 0372-20; • Ensure proper recording and reporting of any cases of infection and undertaken actions.	Contractors implement PCU and PMC monitor implementation	Included in the Contractors budget
Archeological heritages: Chance of finding heritage	• Excavation and other works need to be suspended immediately; • Area with possible heritage shall be fenced with fencing tape; • A designated focal point from a local administration (khokimiyat) needs to be informed and invited for assessment of potential heritage and undertaken necessary actions; • Civil works at the finding place could be recommenced after obtaining permission from the focal point.	Contractors implement PCU and PMC monitor implementation Representative from	Included in the Contractors budget

Impact	Mitigation measure	Responsibility	Cost
		Khokimiyat assist in assessment and undertake necessary actions	
Operation phase			
Impact on air	• Periodically water down temporary roads on site; • Immediately replacing defective equipment and removing it from the work site; • No truck movements in inhabited areas between 22:00 and 6:00.	WSOC	Included on WSOC operational costs
Impact on water resources	• The quality of water supplied for household and drinking needs must comply with the requirements of GOST 2874-82 or regulatory documents of the Republic of Uzbekistan that determine the quality of drinking water. • When storing water used for household and drinking needs, reagents, internal anti-corrosion coatings, as well as filtering materials that meet the requirements of the sanitary and epidemiological department of the Ministry of Health of the Republic of Uzbekistan should be used for use in the practice of household and drinking water supply. • After the commissioning of this facility, it is necessary to ensure the proper and efficient use of water resources and to prevent water losses and leaks and excessive water consumption - installation, operation and periodic checking of water meters at water users. • Conduct awareness program among population to ensure the sustainable operation of the constructed water supply system.	WSOC	Included on WSOC operational costs
Soil pollution	• The top soil of about 30 cm depth shall be removed and stored separately during excavation work, and after the construction of the main trunk pipes the same soil shall be replaced on the top, in unpaved areas; • The excess top soil and earth reminded after construction new WDFs will be used at other project sites or disposed at the places prior approved by local government authorities and The State Committee for Ecology and Environmental protection (Goskomecology); • To minimize soil compaction, movement of all type techniques will be allowed only through identified assess roads; • Contractors will be required to use only authorized carriers with getting all necessary permissions per respective national legislation. • Permits for waste disposal should be received from Provincial Goskompriroda. • Sludge from HH septic tanks has to be timely disposed at the municipal waste area (located . Untimely disposal of generated sludge and place of its disposal	WSOC	Included on WSOC operational costs

Impact	Mitigation measure	Responsibility	Cost
	will be provided in environmental permission (limits on sludge disposal) which "Suvoqova" has to get prior commissioning of WTP.		
Health safety	• Providing required facilities: storage of SHC in well ventilated rooms; • Applying special marking for containers with this agent;	WSOC	Included on WSOC operational costs
Over extraction of ground water	• Volume of extracted water has not exceed established threshold in 720 m^3/day (240 m^3/day for each well)	WSOC	Included on WSOC operational costs

10.2 Environmental Monitoring

To ensure that mitigation actions are implemented in accordance with the requirements of the ESMP, monitoring shall be undertaken as follows:

- Instrumental Monitoring for environmental quality such as air, noise, vibration, water – Monitoring of dust and noise shall be performed monthly by Contractor with usage their own equipment. Cost for this equipment is included in Contractor's budget. Schedules, parameters, locations are indicated are presented in Environmental Monitoring Table 17.
- Observational Monitoring – Throughout the project construction phase Regional PIU's environmental specialist under guideline of PIU SS shall continually monitor the Contractors actions. This will be achieved through weekly inspections of the Contractors environmental performance by Regional PIU's environmental specialist throughout the construction period. PIU shall have the right to suspend works or payments if the Contractor is in violation of any of his obligations under the ESMP and SSEMP.

Developed within current ESIA an Environmental Monitoring Plan provides details on required measurements, the locations of measurements points, frequency and responsibilities associated with each monitoring task (Table 17).

Besides instrumental environmental monitoring indicated into the Table _, monitoring of ESMP's implementation will be carried out. For efficient implementation of this activity it is proposed that several levels of supervision activities need to be undertaken: (i) daily inspection by Contractor's Environmental Officer (EO), (ii) monthly inspection by Regional PIU's SS and (iii) periodic audit (quarterly) by PIU's SS.

It is recommended, that dust and noise level will be measured by Contractor themselves on weekly base. For the measurements Contractor will use own devices which will be certified in local agency – Uzstandard.

Results of environmental performance including monitoring activity have to be properly documented and reported. As indicated in ESMP and Chapter 5, Contractor has to perform a log book with information about conducted training on EH&S for workers and another book for registration accidents during the civil works. Original records on results of required instrumental environmental monitoring (air and water quality) also need to be kept in the separate file for records.

It is recommended, that prior commencement of the civil works, PSC will develop for Contractors a format for site inspection to optimize a process of environmental supervision. The format could be in form of a checklist listed mitigation measures to be implemented at the construction sites, their performance status and some explanations as required.

Table 17: Environmental Monitoring Plan

Mitigation measures	Parameter to be monitored	Location	Frequency	Responsibility	Standards	Cost
Construction Stage						
Air quality	NOx, SO2, CO, Dust	Construction sites located within settlements	Ones per month	Contract will hire certified laboratory to conduct analysis	Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the Republic of Uzbekistan including Annex 1. SanR&N RUz No.0179-04[18]	Cost for hiring laboratory to conduct measurements on monthly base are included in PSC budget Cost is included in Contractor's budget - 6 measurements for 6 month – 500 USD
Noise level	Noise level	1. Construction sites with demolishing works 2. Living houses located next to construction sites	Per complaints from people on noise disturbance during construction	Contractor	1. Noise level during the day time should not exceed 55 dB and for night time – 45 dB 2. Noise level should not exceed 3 dB than baseline – 75 dB day time and 73 dB – night time	Contractor's contract. 1 devise for noise measurements is 200 USD
Vibration	Integrity of houses	Houses and buildings located close to construction site and pipe lying area	Once before construction activity will start	Contractor implements and PMC monitors	No new cracks	Cost is included in the Contractor budget
Water quality	1. Visual monitoring of surface water on	Water bodies located next to construction sites and water	1. Visual during each visit of construction site (at least weekly).	1. Contractor	1. Absence of oil films on the water bodies surface.	Included in Contractor's contracts.

[18] National standards comply with international IFC standards

Mitigation measures	Parameter to be monitored	Location	Frequency	Responsibility	Standards	Cost
	existence oil film and turbidity 2. Oil products, dry residual, pH, ammonia, SO_4 3. Ground water quality monitoring (from hand pumps)	from hand pumps	2-3. Baseline – before construction works and after on monthly base and per complaints from people	2-3. Contract will hire certified laboratory to conduct analysis.	2 If baseline shows non exceeding standards indicated in “Sanitarian requirements for development and approval of maximum allowed discharges (MAD) of pollutants discharged into the water bodies with waste waters”. SanR&N No 0088-99, this standards need to be used. If baseline exceeds standards use baseline indicators for comparison. 3. If baseline shows non exceeding standards indicated in “Drinking water.” O’z'DST 950:2011 – Drinking water. Hygienic requirements and quality control this standards need to be used. If baseline exceeds standards use baseline indicators for comparison.	Cost for hiring laboratory to conduct measurements on monthly base are included in PMO budget - 6 measurements for 6 month is 900 USD
Operation Stage						
Air quality	Noise level	Pump Stations (Wells)	1. Ones per three years as part certification of work places 2. Per complaints from people on noise disturbance due to work of pump station	WSOC	1. "SanitarianNorms of allowed level of noise at the construction sites” SanR&N №0120-01. 2. SanR&N No.026709 Sanitarian Rules and Norms on providing allowed noise level into the living building, public building and territory of living areas	Cost is included into the annual budget of WSOC

Mitigation measures	Parameter to be monitored	Location	Frequency	Responsibility	Standards	Cost
Water quality	Amount of water extracted from the Wells	Wells No1, No2, and No3	Daily	WSOC	The volume has not to exceed a threshold established by State Committee on Geology and Mineral Resources – 720 m^3/day (240 m^3/day for each well)	Cost is included into the annual budget of WSOC
Water quality	Monitoring in accordance with 13.060.20. Drinking water. O'z DST 950:2011 (instead of O'z DST 950:2000) – Drinking water. Hygienic requirements and quality control.					Cost is included into the annual budget of WSOC

10.3 Reporting

Monthly Contractor's environmental reports shall consist of: filled formats from each construction site, brief information on conducted training, received complaints and their resolving, accidents during the civil works if any. Contractors will submit their report to PSC for endorsement before submission to Regional PIU.

The PIU's monthly and quarterly project progress reports will include a section on Environment, Health and Safety (EHS). The reports will contain information about results of own inspections of ESMP implementation. The reports also have to include information on undertaking on-the job and planned training, capacity building activities, proposed actions on improvement of EMP implementation by Contractors or fixing non-compliances observed during audits. A separate section will be dedicated to GRM. This section shall provide information on received complaints and undertaken actions. The reports will be submitted to PMO.

The Regional PIU's Safeguard Specialist (SS), assisted by PIU's Safeguard Specialist (SS) will develop semi-annual Environmental Monitoring Reports based on information reviewed within Contractor's monthly and quarterly reports and own observations during site visits.

PIU will conduct a post-construction audit during the liability period to check compliance of completed construction and camp sites with ESMP requirements. The audit has to be conducted before hand-over project's objects to Client. Based on post-construction audits results, PIU's SS with Regional PIU assistance will prepare final Environmental Monitoring Report to demonstrate that the sub-projects were properly completed.

10.4 Implementation arrangements

10.4.1 Institutional arrangements ESMP implementation

Project Coordination

The Ministry of Economic development and poverty reduction (MoED) of the Republic of Uzbekistan is assigned as Implementing Agency (IA) for the project. To prepare the project, MoED has established a Project Implementation Unit (PIU), whose responsibilities include issues related to project preparation, including the development of the ESMF and procurement strategy and plan, safeguards issues and other activities.

Project implementation team

380. The PIU is led by a Project Director with relevant staff, - full time Environmental and Social Safeguards Specialists and will oversee overall coordination of ESMF and RPF implementation, reporting to MoED, and to the WB regarding safeguards issues, as well as of integrating safeguards requirements into bidding and contracting documents. It is the responsibility of PIU for interacting with the environmental authorities, ensuring an efficient implementation of safeguards documents and PIU will undertake, randomly, field visits and environmental supervision and monitoring, assessing environmental compliance at worksites, advising project Regional Safeguards Specialists on environmental and social safeguards issues. The PIU will be, also, responsible for identifying ESA training needs of all parties involved in ESMPs and RAPs implementation. Among main duties of Environmental SS are the following:

- Undertake a thorough review of the sub-projects' environmental classification in accordance with the WB requirements;

- Providing EA consultants with guidance on the preparation of Category B and C EA documents in accordance with WB requirements;
- Providing EA consultants with guidance on consulting and disclosure requirements for Category B projects;
- Providing EA consultants with guidance on identifying subprojects that would have impacts on cultural heritage sites, natural habitats, forests and international waterways, - subprojects which are to be excluded from the project financing;
- Review of EA documentation, submission of written comments to Regional, EA consultants, ultimately ensuring formal approval of documentation and procedures as required by WB safeguards;
- Ensuring that the subprojects documentation included ESA implementation agreements and any other environmental or social safeguards requirements;
- Oversee jointly with the regional SS the implementation of the ESMP by the construction contractor and the implementation of documents, recommendations and any further actions required as part of the overall reporting of the WB project supervision;
- Be open to comments from affected groups and local environmental authorities regarding the environmental aspects of subproject implementation. Meet with these groups during site visits, as appropriate;
- Coordination and liaison with the WB Supervision Mission with regard to environmental safeguards aspects of the subproject.

Regional administrations and PIU staff

Single Customer Services (SCS) engineering companies under the regional hokimiyats in each participating region will provide services to the PIU. The PIU will mobilize staff based at the regional level, which will include one Safeguards Specialist (SS), whose main duties would be to ensure that the project activities are implemented in compliance with the WB safeguards Operational Policies and national EA rules and procedures. Among major responsibilities of the regional SS will be the following:

a) Ensuring that contractors comply with all ESMPs requirements;
b) Coordinating of all environmental and social related issues at the regional district and qishlok level;
c) Conducting ESMP supervision and monitoring and assessing environmental and social impacts and efficiency of mitigation measures, as well as identifying non-compliance issues or adverse trends in results, and putting in place programs to correct any identified problems;
d) When in need, providing advises and consulting contractors in RAP implementation;
e) Reporting to the PIU with regard to implementation of the ESMPs and RAPs.

Land Resources and State Cadaster Department (LRSCD).

LRSCD for each District in the Project is responsible for identifying and verifying property boundaries and ownership. They also will clarify land allotment certificates for agricultural land that has been formally registered and transferred to the Immovable Property Registration Offices.

The Local Hokimiyats.

Zomin District Hokimiyats and RCA Koshtal are the final beneficiaries of the project implementation; it is required continuous assistance and presence during all the progress of the project. They will be responsible for the coordination of the implementing procedures and execution of the compensation together with MoED/PIU.

10.4.2 Capacity building activity

The implementation of the ESMF requires specific knowledge for beneficiaries and operators engaged in the different phases of the project implementation. The project will support relevant trainings on knowledge and information on topics such as the ESMF implementation, ESIA/ESMP reporting, World Bank EHS Guidelines, management of hazardous materials and etc. For this purpose, before the civil works will start, the PIU will hire a Consultant with knowledge on the environmental and social management requirements for Republic of Uzbekistan, along with substantial knowledge on World Bank safeguards policies and requirements which will provide ESA training. The training will include the basic requirements of the WB and National safeguards rules and procedures, as well as case studies in this regard (table 18). The training activities will continue also during the project implementation when the consultant will provide on the job training regarding environmental and social monitoring and supervision. The proposing the Project's capacity building on environmental and social aspects will cover three main directions:

(i) ***PIU's and Regional' capacity*** on ESMF implementation during sub-projects selection process and sub-project construction stages – the hired Consultant will provide respective training for PIU and Regional's staff and SSs on WB OPs safeguards requirements, ESMF, ESMP, RPF and RAP preparation and further assistance in monitoring of the RAPs and ESMP.

(ii) ***Beneficiaries' Capacity/oblast/district hokimyats*** - on development of ESIA, ESMP and RAPs. Since the program will be implemented during several years, the Consultant will provide training for local authorities involved in preparation of ESA reports and conduction per national EA environmental and social assessments. The training will be dedicated to harmonization of process of WB's ESIA and national ESA. The target will be to educate EA developers and specialist from local environmental agencies to prepare the documents which meet WB safeguards standards as well.

A separate training on handling, collection and disposal of hazardous materials (especially on asbestos materials) for PIU's, RPIUs' SS and contractors will be provided by the Consultant before starting civil works. As per national requirements the contractors will have to conduct OH&S training for workers with indication in special logbook which will be kept on each construction site.

For the project sustainability it is important along with physical interventions, institutional improvements and financial enhancing, to increase people awareness on the project related topics, particularly waste management, water supply and sanitation aspects. It is proposed, that hired Consultant in collaboration with national NGOs and relevant agencies will develop awareness program which will cover three mentioned above topics and delivered to the target groups through seminars. The tentative plan of capacity building and training plan is presented below.

Table 18. Tentative plan for capacity building and training program

No	Name of training	Time and tentative duration of the training	Recipients	Organizer	Tentative cost
1	Overview on WB OPs on safeguards and their implementation during the project cycle. National Environmental requirements for project preparation and implementation	During first year of Project implementation Duration – 1 day	MEI; PIU Regional	Consultant	3,000 USD
2	Implementation of ESMF, ESMP, RPF and ARAP/RAP	Before sub-projects selection and approval Duration - 2 days	PIU's and Regional' SS	Consultant	3,000 USD
3	Development of Gender Action and CE Plans	Before project implementation on the ground 2 days	PIU; Regional; Local authorities	Consultant	3,000 USD each. Total 9,000 for three regions
4	OH&S, Handling and disposal of hazardous materials	Before starting respective works 1 day	PIU; Regional SS; Contractors	Consultant	3,000 USD each. Total 9,000 for three regions
5	Awareness program	Continuously during the program implementation	General Public, Main stakeholders	Consultant, PIU and RPCUs	20,000 USD
6	Citizen Engagement Component	Continuously during the program implementation	PIU and Regional SS	Consultant	3,000 USD each. Total 9,000 for three regions
	Total				53,000 USD

11 CONCLUSIONS

Draft Report on ESIA related to construction of water intake facilities and water pipeline systems in RCA Koshtal, Zomin district of Jizzak region was prepared on the basis of analysis of current condition of environment, water pipeline network and water intake facilities, design solutions and expected impact consequences due to implementation of conducted activities.

A comprehensive assessment based on natural components revealed that at present, part of the population for household needs cut several wells on their own, and part of the population uses spring water. Basically, the population draws water from the so-called tap in the center of the village. The water comes from the only water tower and well, which is in a very poor condition.

Upon provision with centralized water supply of rural area of project of Jizzak region it is supposed that there will be a problem of waste waters utilization and necessity to construct systems of water disposal, otherwise the processes of flooding, salinity and waterlogging are inevitable. In this case waste waters as a result of high specific water consumption rate will burst onto relief of area, drainage system and irrigational network, which will worsen environment sanitary-hygienic situation of the region.

Implementation of these activities will lead to drinking water quality improvement, increase the quantity connections to water pipeline network of population, which will reduce negative impact consequences on soils, grounds and ground waters.

Implementation of activities which are stipulated by the present Project, enables to provide uninterrupted, reliable exploitation of water supply system, increase coverage of population with centralized water supply networks in RCA Koshtal and ensure the prevention of environment from under flooding and pollution.

To reduce possible negative environmental impact the plan of mitigation measures to execute works, plans of environment monitoring and management over environment condition are provided within the project ESIA.

Thus, executed complex assessment of identified consequences of environmental impact from project implementation including construction of pipe line networks and facilities, improvement of management and exploitation of water supply services will not lead to groundwater exhaustion, contamination of water and land resources and will improve population health.

APPENDIX 1. MINUTES OF PUBLIC CONSULTATION

meetings within the framework of the project "DEVELOPMENT OF RURAL INFRASTRUCTURE" on the subproject "Construction of water supply systems to provide drinking water to the population" on the territory of the SSG "Kushtol" of the Zaamin district of the Jizzakh region.

Venue: Meeting room of the MFY "Kushtol" of the Jizzakh region.
Date and time: December 4, 2021, 10:30 a.m.
Goals:

- Inform the population of the project area about the project, about the start of work on the sub-project;
- Provide the public with information on environmental and social measures;
- Explain the procedure for filing complaints;
- Discuss the current situation, wishes and concerns of the population regarding the construction of water wells, water towers and a water pipeline;

Participants: The population of the settlement "Kushtol" - the total number of those present at the meeting was 42 participants, including 25 men and 17 women. (Annex 1) The public hearing was conducted by: Z. Rakhimov, Deputy Director of the PIU "Development of Rural Infrastructure", I. Ruziev, environmental specialist, sociologist D. R. Azimova, ecologist Sh.S. Usmanova.
Topics discussed:

- Social policy of Uzbekistan and the World Bank on rural development and social and environmental impacts.
- about the project and its components;
- information on the commencement of work and the locations of wells and water intakes installations and the laying of an underground pipeline;
- the issue of compensation for resettlement;
- grievance redress mechanism.

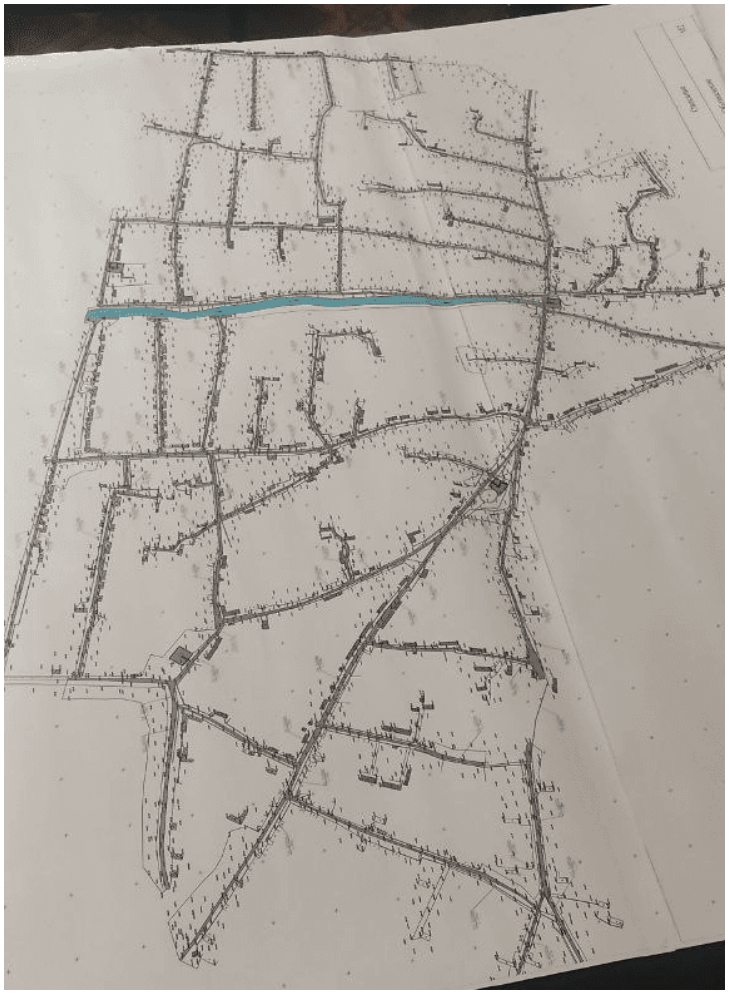
After the presentation, the participants in the hearings raised the following questions:

No.	Question	Answer
one	Residents live almost without water. Many people carry water home in buckets. But even in the column, on the street, sometimes there is no water. Is it possible to start construction as quickly as possible?	Construction will begin around April. We are trying to speed up the process.
2	You told us that the power grid will still be installed. Will these construction projects run in parallel?	Yes, we will try to keep them running in parallel.

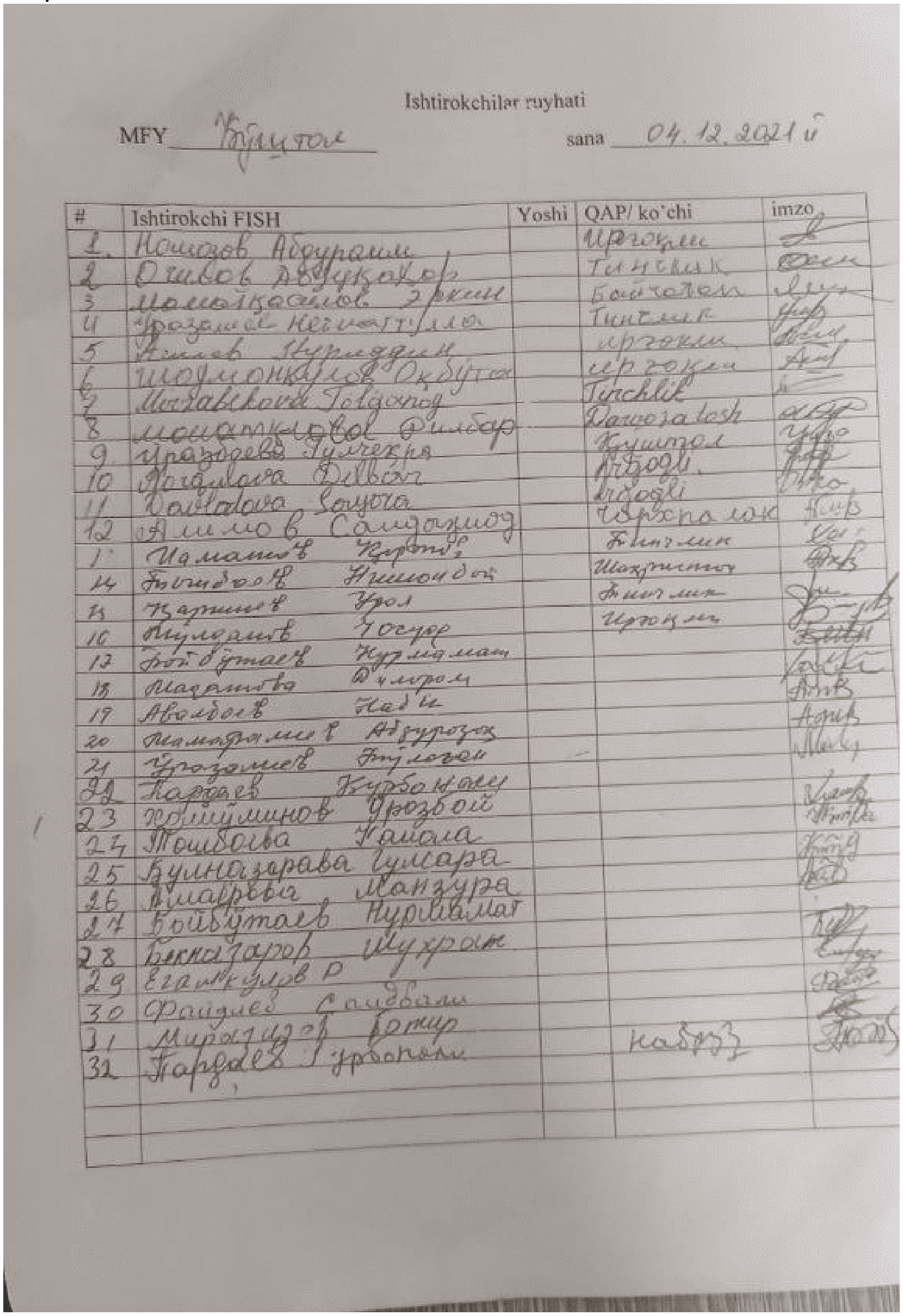
3	If the roads are damaged during the construction of the water pipe. Who will restore them?	Any impact on the social infrastructure of local communities will be restored to their pre-design state. Contractor will rehabilitate local communities or other institution responsible for maintaining any social infrastructure affected.
4	If the trees are demolished. Will there be compensation?	No impact on trees was identified during the work on the subproject. The project provides for compensation in the event of loss of wood from trees, compensation will be based on the market value of the dry volume of wood from the affected tree. Compensation for trees will be exempt from deducting the value of timber left behind by PAPs. Fruit trees will be reimbursed at a replacement cost equivalent to the average annual net income over the last three years plus input costs multiplied by 4 times (years) to reflect the duration from planting to production stage. The trees that are not yet bearing fruit will be compensated at the replacement cost, which is equivalent to the net profit for 1 year.

Appendix

Photo



List of participants



Ishtirokchilar ruyhati

MFY Бўлуто   sana 04.12.2021 й

#	Ishtirokchi FISH	Yoshi	QAP/ ko'chi	imzo
1.	Номозов Абдурахим		Иргокли	[illegible]
2	Очилов Абдуқаҳҳор		Тинчлик	[illegible]
3	Маматқосимов Эркин		Бойчечак	[illegible]
4	Уразмов Неъматулла		Тинчлик	[illegible]
5	[illegible] Нуриддин		Иргокли	[illegible]
6	Шодмонкулов Оқбута		Иргокли	[illegible]
7	Mo'tabekova Tolg'anoy		Tinchlik	[illegible]
8	Маматкулова Дилбар		Darvozatosh	[illegible]
9.	Уроздоева Гулчехра		Кушпол	[illegible]
10	[illegible] Dilbar		Irg'ogli.	[illegible]
11	Davlatova Sayyora		Irg'ogli	[illegible]
12	Алимов Саидахмад		Чорхоналок	[illegible]
13	Исмаилов Қурбон		Тинчлик	[illegible]
14	[illegible] Нишонбой		Шахристон	[illegible]
15	Жаркинов Урол		Тинчлик	[illegible]
16	Нурмаматов Йосуф		Иргокли	[illegible]
17	Бойбутаев Нурмамат			[illegible]
18	Маматова [illegible]			[illegible]
19	Абдиев [illegible]			[illegible]
20	Мамарахимов Абдураззоқ			[illegible]
21	Уразимов [illegible]			[illegible]
22	Пардаев Курбонали			[illegible]
23	Хошимжонов Урозбой			[illegible]
24	Тошбоева Жамола			[illegible]
25	Бунназарова Гулсара			[illegible]
26	Амаева Манзура			[illegible]
27	Бойбутаев Нурмамат			[illegible]
28	Бекназаров Шухрат			[illegible]
29	Егамкулов Р			[illegible]
30	Файзиев Саидбали			[illegible]
31	Мирзаизов Ботир		Кабоб	[illegible]
32	Пардаев [illegible]			

APPENDIX 2. PROHIBITED INVESTMENT ACTIVITIES LIST

The following do not qualify for Asian Development Bank financing:

(i) production or activities involving harmful or exploitative forms of forced labor[19] or child labor;

(ii) production of or trade in any product or activity deemed illegal under host country laws3 or regulations or international conventions and agreements or subject to international phaseouts or bans, such as (a) pharmaceuticals, pesticides, and herbicides,4 (b) ozone-depleting substances,5 (c) polychlorinated biphenyls6 and other hazardous chemicals,7 (d) wildlife or wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora,8 and (e) transboundary trade in waste or waste products;9

(iii) production of or trade in weapons and munitions, including paramilitary materials;

(iv) production of or trade in alcoholic beverages, excluding beer and wine;10

(v) production of or trade in tobacco;10

(vi) gambling, casinos, and equivalent enterprises;

(vii) production of or trade in radioactive materials,11 including nuclear reactors and components thereof;

(viii) production of, trade in, or use of unbonded asbestos fibers;12

(ix) commercial logging operations or the purchase of logging equipment for use in primary tropical moist forests or old-growth forests;

(x) marine and coastal fishing practices, such as large-scale pelagic drift net fishing and fine mesh net fishing, harmful to vulnerable and protected species in large numbers and damaging to marine biodiversity and habitats.

19

APPENDIX 3. SUB-PROJECT SCREENING DOCUMENT

1-SHAKL

Benefitsiar tomonidan to'ldiriladi*(ko'makdosh hamkorlar, qishloq fasilitatorlari, qishloq muhandislari yordamida mahalla rivojlanish guruxi a'zolari tomonidan bajariladi)*

Sana: "17" noyabr 2021yil

Manzil: Qo'shtol MFY Zomin tuman Jizzax viloyat

1. **Loyiha nomi:** *Qishloq infratuzilmasini rivojlantirish loyixasi*

2.Loyihaning qisqacha tavsifi quyidagilarni o'z ichiga oladi:

- loyiha mohiyati – "Qo'shtol" MFYni ichimlik suv bilan ta'minlash
- qiymati – 410 ming. AQSH dollar
- jismoniy xajmi – 200 -500 xonadon
- maydoni – 26,2 km
- joylashgan joyi – Jizzax viloyat Zomin tumani Qo'shtol MFY
- mulkka egalik kilish – Jizzax viloyat "Suvta'minot " MCHJ Zomin tumani filiali
- olib boriladigan ishlar
- davomiyligi –1 yil (12 oy)
- kengaytirish yoki yangi
- qurish rejalari burg'ulash, – 26,20 km suv tarmog'i tortish, 3 dona Yangi chuqur suv quduqlarini 25 m³ hajmdagi 3 dona suv minorasi o'rnatish, quduqlarga sanitar himoya zonalari qurish, TP o'rnatish, elektromontaj ishlari, bio-bak uskunasi o'rnatish.

3.Qurilish yoki ekspluatatsiya bosqichlarida loyiha quyida keltirilgan atrof-muhit parametrlariga ta'sir ko'rsatadimi?Qaysi davrlarda ta'sir qilishi va engillashtiruvchi choralarni ko'rish zarurligini ko'rib chiqib to'ldiring.

Atrof- muhitga daxldor komponentlar	Qurilish bosqichi	Foydalanish bosqichi	Engillashtirish choralari
Yer osti muhiti va ch..jindi			
Yer va tuproqning tanazzulga uchrashi: loyiha yer qazishni o'z ichiga oladimi?	Ha	-	• texnikalarni ishlash jarayonida yerni unumdor qatlamiga zarar etkazmaslik choralarini ko'rish
Qattiq, shu jumladan toksik chiqindilar hosil bo'ladimi?	Ha	Qattiq va maishiy chiqindilar	• barcha turdagi chiqindilarini vaqtinchalik saqlash uchun belgilangan talablarga asosan maxsus joy ajratish; • Hosil bo'lgan chiqindilarni o'z vaqtida utilizatsiya qilish choralarini ko'rish
Tuproq va yer osti suvlarining ifloslanishi	Ha	yo'q	• Qurilishda soz texnikalardan foydalanish
Atmosfera xavosi			
Loyiha davomida atrof-muhitga ifloslantiruvchi chiqindilar tashlanadimi ?	Xa	yo'q	• qurilish hududida changlarni ko'tarilishini oldini olish maqsadida suv sepib bostirish
Suv			
Suv miqdori: loyiha davomida suvdan foydalaniladimi?	yo'q	ha	• Suvdan foydalanish limitlariga rioya qilish.va maqsadli sarflash
Suv sifati/ifloslanish: loyiha yer usti suvlarining ifloslanishiga ta'sir qiladimi?	yo'q	yo'q	
O'simlik dunyosi			
Loyiha davomida o'simlik dunyosiga ta'siri ?	yo'q	yo'q	• Daraxt va butalarni kesilishiga yo'l qo'ymaslik • Qurilishga xalaqit qilayotgan daraxt va butalarni ko'chirish choralarini ko'rish.
Ijtimoiy-iqtisodiy muhit			
Loyiha inson salomatligining yomonlashishiga, mehnat xavfsizligi va loyiha hududi yaqinida yashovchi aholining bezovtalanmasligini ta'minlay oladimi?	Ha	yo'q	• majburiy mehnat va bolalar mehnatidan foydalanmaslik; • mehnat havfsizlik qoidalariga to'liq rioya qilish;
Mazkur loyiha mahalliy aholining atrof-muhit bo'yicha muomo va mulohazalarini inobatga olish uchun jamoaviy maslahatlarni talab etadimi?	Ha	yo'q	• loyihaning skrining ishlari to'liq bitgandan keyin aholiga jamoaviy maslahtlashuvni talab etadi
Ijtimoiy ta'sirlar	Ha	yo'q	• Loyiha hududiga havfsizlikni ta'minlash maqsadida maxsus belgilar o'rnatish; • majburiy mehnat va bolalar mehnatidan foydalanmaslik

Imzolandi:

Mahalla taraqqiyot guruhi a'zolari

Qishloq fasilitator/ muhandis

2-SHAKL

(viloyat AMIH mutaxassisi tomonidan ekologik skrining cheklist natijalari asosida to'ldiril)

Sana: «18» noyabr 2021 yil
Manzil: Qo'shtol MFY Zomin tuman Jizzax viloyat

1. **Loyiha nomi**: Ichimlik suv bilan ta'minlash

2. JB talabi va O'z.Res qonunchiligiga asosan sub-loyihaning ekologik toifasini belgilang:
   Jaxon Banki – "A" (B) "C" O'zbeksiton Respublikasi qonunchiligi – "1" "2" "3" (4)
   (agar loyiha "A" yoki "1" toifaga mansub bo'lsa, keyingi bo'limlarni to'ldirishni kerek emas, bunday sub-loyihalarni loyihaga kiritish mumkin emas va moliyalashtirilmaydi)

3. Loyihaviy tadbirlar quyidagi tarzda amalga oshiriladi:
   a) Nozik va qiymati yuqori ekotizimlarda - botqoq yerlarda, yovvoyi yerlarda va yo'qolib ketish xavfi ostida turgan turlarning yashash joylarida –*yo'q*(ha yoki yo'q)
   b) arxeologik va / yoki tarixiy joylar yoki mavjud madaniy va ijtimoiy muassasalar joylashgan joylarda yoki uning yonida; *yo'q*(ha yoki yo'q)
   c) ko'chirish talab etiladigan yoki ifloslanishning potensial ta'siri va boshqa buzilishlar jamoalarga jiddiy ta'sir ko'rsatishi mumkin bo'lgan zich joylashgan joylarda; -*yo'q*(ha yoki yo'q)
   d) Katta qurilish faoliyatlari bor bo'lgan hududlarda yoki tabiiy resurslarni taqsimlashda ziddiyatlar mavjud bo'lgan joylarda; suv oqimlari bo'ylab, suvli suv zaryadlanadigan joylarda yoki ichimlik suvi uchun ishlatiladigan suv omborlarida; va qimmatbaho resurslarga ega bo'lgan erlarda yoki suvlarda (baliqchilik, minerallar, dorivor o'simliklar, qishloq xo'jaligining yaxshi tuproqlari) - *yo'q*(ha yoki yo'q)

   Agar «ha» bo'lsa, subloyiha Dasturdan chiqariladi

4. Ekologik baholash (EB) talab etiladimi? (ha yoki yo'q) -ha
5. Talab qilinadigan EB hujjatlarining turlari (keraklisini belgilang):

   (a) Atrof-muhit va Ijtimoiy Ta'sirni Baholash(AMITB) va Atrof-muhit va Ijtimoiy Boshqaruv Rejasi (AMIBR);
   b) "B" toifadagi subloyihalar uchunAMIBR;
   c) Atrof-muhit Boshqaruv Rejasi (AMBR) cheklist (kichik hajmdagi qurilish / qayta ta'mirlash sub-loyihalari uchun);
   d) AMIBR cheklist (kichik miqyosdagi yo'llarni qayta ta'mirlash loyihalari uchun);
   e) Atrof-muhit (ekologik) skiring cheklist
   (f) Atrof-muhitga ta'sir ko'rsatish to'g'risidagi ariza loyihasi (2-4 sub-loyihalari uchun)
   g) Atrof-muhitning oqibatlari to'g'risidagi bayonot (faqat 2 ?-toifalar uchun sub-loyihalari uchun)

6. Sub-loyiha qanday ekologik va ijtimoiy muammolarni ko'taradi?
   Chiqindilarning hosil bo'lishi (qurilish chiqindilari), havoning emissiyasi (ichimlik suv bilaan ta'minlashda noorganik changlar hosil bo'lishi), qurilish ishlari paytida shovqin kabi muammolar kelib chiqadi.
7. Agar EB zarur bo'lsa, qanday muammolar hal qilinishi kerak?
   Rejalashtirilgan ishlar hududlarida tuproq va o'simlik qatlamini, daraxt va buta o'simliklarini saqlashga qaratilgan tabiatni muhofaza qilish bo'yicha tayyorgarlik tadbirlari, Chiqindilarni vaqtincha saqlash uchun maxsus joy ajratish va, qurilishdan hosil bo'ladigan chiqindilarni Toza hudud DUK bilan shartnoma asosida markaziy chiqindixonaga olib chiqish hamda belgilangan tartibda utilizatsiya qilish, Qurilish ishlarida changni bosish uchun suv sepish, Yaqin atrofdagi turar-joy binolari hududida shovqin darajasi kun davomida 55 dB dan, tunda esa 45 dB dan oshmaslik choralarini ko'rish.)
8. EB ni o'tkazish muddati va taxminiy narxi qancha? 1 oy, taxminiy narxi 3 mln.dan-10 mln.gacha
   Xulosa (sub-loyihani dasturga kiritish mumkin va agar "Ha" bo'lsa, qanday sharoitlarda):
   Jahon banki talablari va O'zbekiston Respublikasi Tabiatni muhofaza qilish to'g'risidagi qonuni, qarorlariga, Davlat ekologik ekspertizasining ijobiy xulosasida ko'rsatilgan talablarga asoslangan holda

Atrof-muhitni ijtimoiy himoya qilish mutaxassisi **E.Qorayev**

2.1 Shakl
Ko'chirish va ijtimoiy skrining shakli

Subloyiha nomi *Ichimlik suv bilan ta'minlash*
Subloyiha amalga oshiriladigan joy *Zomin tuman Qo'shtol MFY*
(fotosuratlar yordamida va xarita-sxemasida belgilash bilan sub-loyiha amalga oshiriladigan joyni ko'rsating)
Faoliyat turi: Ichimlik suv bilan ta'minlash (yangi qurilish, rekonstruksiya qilish,tiklash,texnik xizmat ko'rsatish)

Taxminiy boshlanish sanasi

Tekshirish ro'yxati:

№	Mavjud ta'sirlar	Mavjudligi (Ha/Yo'q/Muvofiq emas)	Tafsilotlar
1.	Subloyiha uy-joy, boshqa mol-mulk va resurslarga zarar yetkazishi yoki ularning yo'qotilishiga olib kelishi mumkinmi? Iltimos aniqlik kiriting, vaqtinchalikmi yoki doimiymi	Yo'q	
2.	Subloyiha xususiy yoki davlat yeriga tushadimi?	Yo'q	Davlat yeri
3.	Loyihani amalga oshirish tufayli vaqtincha majburiy ko'chirish/jismoniy ko'chib o'tishga sabab bo'ladimi?	Yo'q	
4.	Loyihani amalga oshirish uchun aholini yoki korxonalarni jismoniy yoki iqtisodiy jihatda ko'chirish kerakmi? Iltimos, aniqlik kiriting	Yo'q	Yangi chuqur suv qudug'i, tarmog'i atrofida aholi turar joylari 10-30 m uzoqlikda joylashgan
5.	Yer uchastkasini olish bo'ladimi? Bu yer vaqtincha majburiy olib qo'yiladimi yoki in'om qilib beriladimi?	Yo'q	
5A	Hozirda yer qaysi maqsadda foydalanilmoqda - Yerda yashaydigan yoki yerdan pul topadigan oilalar bormi- Ha bo'lsa, qancha Ularning tirikchiligi / hayotiga ta'sir qiladimi? Ha bo'lsa, qanday	Yo'q	Yangi chuqur suv qudug'I, tarmog'i atrofida aholi turar joylari 10-30 m uzoqlikda joylashgan
6.	Agar yer olingan yoki in'om qilingan bo'lsa, iltimos, uning xajmi va egalik holatini ko'rsating.	Yo'q	Bunday holat yoq
6A	Hozirda yer qaysi maqsadda foydalanilmoqda – Yerda yashaydigan yoki u orqali pul topadigan oilalar bormi – Ha bo'lsa, qancha Ularning tirikchiligi/hayot tarziga ta'sir	Yo'q	Ichimlik suvi bilan ta'minlanmagan

	qiladimi? Ha bo'lsa, qanday		
7.	Sizningcha, zarar ko'rgan yer egalari in'om qilgan yerlarining 20% dan ko'prog'idan mahrum bo'lishi mumkinmi?	Yo'q	
8.	Bahsli hududlar bormi?	Yo'q	
9.	Vaqtinchalik jismoniy ko'chirishda, qurilish davomida, tijorat inshoatlari, turar-joy binolari, yo'llar, piyodalar yo'lakchalari va veloyo'laklarga o'tish imkoniyati bo'ladimi?	Yo'q	
10.	Vaqtinchalik jismoniy ko'chirishda, aholi va tadbirkorlik sub'ektlarining daromadi kamayishi xavfi bormi?	Yo'q	
11.	Qurilish ishlari uchunfoydalaniladigan sub-loyiha joylashgan yerda yashaydigan yoki tadbirkorlik bilan shug'ullanadigan biron-bir ro'yxatga olinmagan odamlar bormi? Vaqtinchalik ta'sir ko'rsatishi mumkinmi?	Yo'q	
12.	Vaqtinchalik ko'chirish paytidagi yo'qotishlarni taxminiy baholay olasizmi? Masalan: maktabga va ishga piyoda yurish vaqti ko'payadi va transportdan foydalanish talab etiladi (moliyaviy og'irlik); hovlilarda mevalarni yig'ib olish kechikadi yoki bo'lmaydi, natijada moliyaviy yo'qotishga olib keladi; va xokazo.	Yo'q	
13.	Subloyihalar bilan bog'liq qurilish/tiklash ishlari tufayli odamlar ob'ektlar, xizmatlar yoki tabiiy resurslardan foydalanish huquqidan doimiy yoki vaqtincha mahrum bo'ladimi?	Yo'q	
14.	Sizningcha, vaqtincha ko'chirish aholining noroziligi va tashvishlariga sabab bo'ladimi?	Yo'q	
15.	Sizningcha, vaqtincha ko'chirishdan zarar ko'rgan shaxslarga teng munosabatda bo'linmaydimi? Masalan, kambag'al va yordamga muhtoj oilalarga ta'sir qilishi yoki yomonroq munosabatda bo'lishi mumkin.	Yo'q	
16.	Ushbu qishloqda shaharsozlik ishlari, davlat infratuzilma loyihalari va boshqalar doirasida vaqtincha yoki doimiy ravishda yern olish va majburiy ko'chirish holatlari bo'lganmi? Agar xa bo'lsa, iltimos,tafsilotlarni ko'rsating	Yo'q	
17.	Berilgan hududda majburiy ko'chirishning ayni paytda to'g'irlashni talab etadigan avvalgi ta'siri to'g'risida biron bir fakt mavjudmi?	Yo'q	
18.	Odamlarni vaqtinchalik ko'chirishga oid	Yo'q	

	boshqa muhim faktlarni ko'rsating		

Muayyan ta'sirlarni taxmin qilish:

Ta'sir	**Tafsilotlar**
Sub-loyihaning komponentlari	Qurulish ishlsridagi sanitar xolat
Xususiy va talab etiladigan yer m²	26200 metr
10%dan ko'proq yerlarini yo'qotayotgan mulkdorlar soni	Yo'q
m²da davlat va talab etilgan yerlar	Yo'q
m²da talab etiladigan o'rmon yerlari	Yo'q
Zarar ko'rgan uylar soni	Yo'q
Do'konlar va boshqa tadbirkorlik sub'ektlari soni	Yo'q
Zarar ko'rgan kommunal xizmat korxonalari	Yo'q
Boshqa ma'lumotlar	Yo'q

Loyihadan zarar ko'rgan shaxslar (LZSh) to'g'risida ma'lumot:

- Sub-loyihadan zarar ko'radigan taxminiy uy xo'jaliklari soni? Yo'q
- Ishlab chiqarish aktivlarining 10% dan ko'prog'ini yo'qotadigan LZSh (er/molxona/do'konlar/daraxtlar va boshq.) Yo'q
- Ishlab chiqarish aktivlarining 10% dan kamrog'ini yo'qotadigan LZSh (er/molxona/do'konlar/daraxtlar va boshq.) Yo'q
- Yordamga muhtoj uy xo'jaliklari zarar ko'radimi? Ha bo'lsa, iltimos, tafsilotlar va mavjud ijtimoiy va iqtisodiy ta'sirlarni tavsiflab bering. Yo'q
- Ayollar boshqaradigan uy xo'jaliklari zarar ko'radimi? Ha bo'lsa, iltimos, tafsilotlar va mavjud ijtimoiy va iqtisodiy ta'sirlarni tavsiflab bering.Yo'q

Toifalar bo'yicha qaror:
To'plangan ma'lumotlarni o'rganib chiqib, subloyiha quyidagicha tasniflanganligi aniqlandi:

1 toifa – to'liq KHR talab qilinadi;
2 toifa – QKHR talab qilinadi;
3 toifa – kompleks tekshiruv hisoboti(KTH).

Sana: 17.11.2021 yil.

Imzolandi:

Hududiy atrof-muhit va ijtimoiy himoya mutaxassisi (AMIHM)

Кораев Э — *F.I.Sh* ; ——— *imzo*

MTG raisi

Уролов К — *F.I.Sh* ; ——— *imzo*

KH/QFva QM

——— *F.I.Sh* ; ——— *imzo*

APPENDIX 4. CONCLUTION OF CENTER FOR EVIRONMENTAL EXPERTISE

O'ZBEKISTON RESPUBLIKASI EKOLOGIYA VA ATROF-MUHITNI MUHOFAZA QILISH DAVLAT QO'MITASI
JIZZAX VILOYATI EKOLOGIYA VA ATROF-MUHITNI MUHOFAZA QILISH BOSHQARMASI

130116 Jizzax shahri SH.Rashidov shox ko'chasi 72-uy, tel: (0 372) 222-40-79, faks: (0 372) 222-41-99, djizzak@uznature.uz, jizzaxtabiat@exat.uz

DAVLAT EKOLOGIK EKSPERTIZASI XULOSASI

По объекту:	Проект заявления о воздействии на окружающую среду (ЗВОС) строительство систем водоснабжения для обеспечения питьевой водой населения на территории ССГ «Куштол» Зааминском районе Джизакской области.
Заказчик:	ООО "KOMFORT LIDER KAPITAL"
ИНН:	304443846
Категория:	III, п.7, ПКМ РУз №541 от 07.09.2020 г.
Разработчик:	ООО "EKOLOGIYA"
Эксперт:	MALIKOV SHERZOD TURABEKOVICH

Организация:	ООО "KOMFORT LIDER KAPITAL"
Руководитель:	СОДИКОВ БЕКЗОД ИНОМЖОНОВИЧ

На рассмотрение ГУП «Центр государственной экологической экспертизы Джизакской области» представлены материалы оценки воздействия на окружающую серу (ЗВОС) строительство систем водоснабжения для обеспечения питьевой водой населения на территории ССГ «Куштол» Зааминском районе Джизакской области.

Основанием для разработки проекта ЗВОС послужили действующие законы «О дальнейшем совершенствовании механизма оценки воздействия на окружающую среду» утвержденным ПКМ Республики Узбекистан за № 541 от 07.09.2020г. В соответствии с приложением №1, объект экспертизы по видам деятельности отнесен к III категории воздействии на окружающую среду (низкий риск).

Площадь объекта проектируемых работ расположена на территории ССГ «Куштол» Зааминского района Джизакской области. Вблизи данного объекта расположены жилые дома и проходит дорога.

На участке строительства отсутствует промышленность. Каких-либо материальных и исторических памятников на отведенной территории не имеется.

Территория, выделяемая, под намеченную деятельность не является природоохранной. Деревья и кустарники, подлежащие вырубки по пути прокладки водопроводных труб отсутствуют. Отрицательное влияние на животный мир не ожидается.

В настоящее время часть населения ССГ «Куштол» для хозяйственно – бытовых нужд сами своими силами пробурили несколько скважин, а часть населения используют родниковую воду (провели водопроводную сеть из ПЭ трубопроводов).

Проектирование и строительство объекта предусматривается на основании Постановления Президента Республики Узбекистан о мерах по реализации проекта «Развитие сельской инфраструктуры» с участием Международной ассоциации развития Всемирного Банка и Азиатского Банка инфраструктурных инвестиций под № ПП-4898 от 25.11.2020 г.

Предприятия по строительству, реконструкции скважин, водозаборов, водопроводов, прокладке подземных трубопроводов относятся к разряду небольших предприятий, которые не могут существенно повлиять на социально-экономическую обстановку и уклад жизни людей.

Вместе с тем водоснабжение жилых поселков положительно сказывается на социально-бытовых условиях жизни населения.

При строительстве систем водоснабжения распределительная сеть будет выполнена из полиэтиленовых труб. Полиэтиленовый трубопровод самый экономичный и практичный.

Основными критериями использования полиэтиленовых труб являются:

- отсутствие проблемы коррозии;

- легкость нарезки и укладки отдельных звеньев;

- повышенную пропускную способность;

- отсутствие накипи и засорение взвесями, содержащиеся в рабочей жидкости, которые не пристанут к эластичным внутренним стенкам;

- отсутствие необходимости в дополнительной защите химически инертного материала от воздействия агрессивных сред и блуждающих электрических токов;

- экономию на соединительных деталях, проектирование и прокладке за счёт невероятной гибкости материала, позволяющего добиться минимального радиуса изгиба;

- лёгкость, упрощающую транспортировку, монтаж и укладку;

- устойчивость к температурным перепадам;

- санитарно – гигиеническую безопасность.

Объём изымаемого грунта от прокладываемой траншеи составляет -20174 м3. Длина траншеи – 26200м; глубина траншеи -1,1 м; ширина траншеи – 0,7м.

В результате того, что при строительстве систем водоснабжения распределительная сеть будет выполнена из полиэтиленовых труб, то отходы токсичных отходов (асбестосодержащих материалов) отсутствуют.

Обеспечение населения ССГ «Куштол» питьевой водой будет осуществляться от проектируемых скважин в количестве –3 шт.

Протяженность водопроводной трассы для обеспечения питьевой водой населения ССГ «Куштол» - 26,2 км.

Вода используется на хозяйственно-питьевые нужды населения и водопой скота. Запланировано обеззараживание воды методом УФ обеззараживания (бактерицидная установка DUV – 1A500-NMST).

Количество домохозяйств расположенных на территории ССГ «Куштол» Зааминского района Джизакской области - 595 домов.

Количество населения проживающих на территории ССГ «Куштол» Зааминского района Джизакской области обслуживающей данной системой водоснабжения - 4055 человек, из них 2027 чел. мужского населения, 2028 человек женского населения. Количество КРС - 1560 голов. Количество МРС - 5862 голов.

На территории населенного пункта расположены следующие муниципальные объекты: школа, детский сад, СВП.

Основные виды деятельности: животноводство, земледелие, мелкий бизнес. Женская половина населенного пункта, в основном занимается домохозяйством.

Что касается вынужденного переселения, не было выявлено воздействий, которые могут повлечь отвод земель, ограничения на экономическую деятельность или физическое переселение.

Рабочим проектом определены следующие объемы работ:

- бурение и обустройство скважин в количестве – 3 шт;

- установка водонапорной башни в количестве –3 шт по 25 м3 каждая;

- строительство домика для каскада и бактерицидной установки в количестве – 3 шт;

- укладка полиэтиленовых труб –длиной – 26,2км;

- устройство водопроводных колодцев ВК;

- устройство запорных арматур.

Режим работы при строительстве водопроводной трассы – 8 час/сут, 300 дн/год. Количество рабочих занятых при строительстве – 20 человек. Количество рабочих необходимых для обслуживания 3-х проектируемых скважин – 3 человека.

Режим работы при строительстве водопроводной трассы – 8 час/сут, 300 дн/год. Количество рабочих занятых при строительстве – 20 человек. Количество рабочих необходимых для обслуживания 2-х проектируемых скважин – 2человек.

Оценка изменений окружающей среды как последствий выявленных воздействий от данного предприятия следующая:

Во время проведения работ по строительству объекта в атмосферном воздухе будут наблюдаться повышенные концентрации неорганической пыли и продуктов сгорания топлива, возникающие в результате строительных работ и использования строительной техники.

Для оценки выбросов вредных веществ в атмосферу при строительстве данного объекта на состояние атмосферного воздуха произведен расчет максимальных приземных концентраций - оксид железа, оксида марганца, окиси углерода, неорганической пыли, углеводородов, двуокиси азота, сажи и сернистого газа. Суммарный выброс загрязняющих веществ, в атмосферный воздух прогнозируемый за период строительства, составляет 0,09327 т/год.

Из результатов анализа полей приземных концентраций загрязняющих веществ, следует, что на данном объекте не отмечаются уровни загрязнения атмосферного воздуха, превышающие уровни ПДК по сравнению с заданной квотой, таким образом, воздействие на атмосферный воздух при строительстве водопровода является допустимым.

Характер воздействия химических вещества при строительстве данного объекта будет временным, обратимым и не окажет существенного вредного влияния на природную среду. Также при соблюдении, заложенных экологических мероприятий и при соблюдении условий эксплуатации оборудования, предусмотренные, проектом данный объект не окажет существенного влияния на состояние природной среды района проведения работ про строительству систем водоснабжения.

Эксплуатация скважины и водопроводной трассы не предусматривает возникновение выбросов загрязняющих веществ в атмосферу.

В процессе изучения производства выявлены, что при проведении работ по строительству данного объекта основными отходами являются вскрышные породы, т.е. верхний плодородный слой почвы. Предприятия при проведении работ (строительство скважины, строительство линии подземного водопровода) связанных с нарушением почвенного покрова, обязаны предусмотреть снятие плодородного слоя почвы не менее 10 см по профилю, хранить, и наносить плодородный слой почвы на место после окончания строительства линии подземного водопровода.

В период строительства систем водоснабжения образуются ТБО в результате жизнедеятельности рабочих, при проведение работ по строительству объекта на участке образуется также строительный мусор. Количество отходов зависит от объёма и характера выполняемых работ. В основном это осколки кирпичей, штукатурки, стружка, металлолом. Отходы в виде лома необходимо сдавать во вторчермет. Отходы в виде бумаги необходимо сдавать в макулатуру. Возможны варианты использования отходов в виде осколков кирпича и бетона в качестве заполнителя в бетонных работах.

При проведение работ по строительству объекта ожидается воздействие на почву, а далее на подземные воды загрязнением от строительных растворов (цемент, известь). В результате выпадения осадков ожидается загрязнение территории ливнево - дождевыми стоками. Для предупреждения таких загрязнений на территории необходимо:

1. Растворы извести и цемента производить в специальной посуде;

2. Для приготовления растворов необходимо выбрать площадки, которые в благоустроительных работах будут забетонированы. Эти площадки необходимо покрыть бетоном, устроить временные лотки для отвода стоков во временные лотки. После завершения строительства отстойники очистить от шлама и вывести на свалку. Отстойники демонтировать.

В результате того, что при строительстве систем водоснабжения распределительная сеть будет выполнена из полиэтиленовых труб, то отходы асбестосодержащих материалов отсутствуют.

В период эксплуатации скважины твердые отходы (стекло, бумага и т.д.) необходимо вывозить на свалку в установленном порядке. Бытовой мусор необходимо складировать в металлических контейнерах на специально отведенной площадке. Количество мусора образующегося за период производственного года складывалось из отходов, образующихся в результате жизнедеятельности рабочих, уборки территории выделенной под посадку древесно-кустарниковой растительности необходимой для подавления шума и вибрации, а также распространения загрязняющих ингредиентов и уборки территории с твёрдым покрытием.

Образовавшиеся строительные отходы необходимо складировать на удобном для сбора месте и по мере накопления обеспечить их вывоз в места согласованные с соответствующими организациями.

Таким образом, реализация работ не сопряжена с образованием токсичных отходов. При соблюдении технологического регламента и соблюдении, заложенных экологических мероприятий негативное влияние образующихся отходов на окружающую среду исключено.

Источником водоснабжения для хозяйственно – питьевых нужд для рабочих занятых на строительстве данного объекта является привозная вода (бутилированная). Объем водопотребления составляет - 0,5 м3/сут или 0,15 тыс.м3/год.

Объем водоотведения равно объему водопотребления.

Для сбора хозяйственно – фекальных стоков на территории строительной площадки запланировано установка переносного биотуалета. По мере накопления стоки вывозятся в места указанные СЭС.

Для смачивания грунта используют привозную воду с родника. Для смачивания грунта на строительный период потребуется 1613,92 м3 воды, расход воды является безвозвратным.

Источником хозяйственно-питьевой воды будут служить проектируемые скважины. Вода используется на хозяйственно-питьевые нужды населения и водопой скота. Объем водопотребления составляет - 399,047 м3/сут или 145,6521 тыс.м3/год.

Вокруг скважины необходимо создать зону санитарной охраны, не рекомендуется вблизи зоны строить хозяйственные сооружения, свалки мусора, туалет и т.д. Территорию зоны санитарной охраны, оградить забором или металлической сеткой, поверхность земли должна быть спланирована так, чтобы атмосферные осадки имели сток от устья проектируемых скважин.

Для водозаборов всех категорий следует предусмотреть наличие на складе резервных насосов, при количестве рабочих скважин до 3 – 1 резервный насос.

Качество воды, подаваемые на хозяйственно – питьевые нужды, должно соответствовать требованиям ГОСТ 2874-82 или нормативных документов Республики Узбекистан, определяющих качество питьевой воды.

При хранении воды, используемый на хозяйственно - питьевые нужды, следует применять реагенты, внутренние антикоррозийные покрытия, а также фильтрующие материалы, соответствующие требованиям санитарно – эпидемиологического управления Минздрава Республики Узбекистан для применения в практике хозяйственно – питьевого водоснабжения.

После введения в строй данного объекта необходимо обеспечения надлежащего и эффективного использования водных ресурсов и предотвращение потерь и утечек воды и чрезмерного водопотребления - установка, эксплуатация и периодическая проверка водомеров у водопользователей.

Ввиду вышеизложенного разумно предположить что, соблюдая все заложенные экологические мероприятия строительство данного объекта не окажет негативного воздействия на природную среду и здоровье населения.

Из вышеуказанного Джизакское областное управление по экологии и охране окружающей среды СОГЛАСОВЫВАЕТ проект заявления о воздействии на окружающую среду (ЗВОС) строительство систем водоснабжения для обеспечения питьевой водой населения на территории ССГ «Куштол» Зааминском районе Джизакской области, как удовлетворяющий требованиям законодательства.

В соответствии со ст.22 Закона Республики Узбекистан «Об экологической экспертизе» данное заключение Государственной экологической экспертизы имеет юридическую силу в течение трех лет со дня его выдачи. В соответствии приложением № 2 к ПКМ 541 от 07.09.2020 г. при изменении виды деятельность или проектных решений, не указанного настоящим заключением Госэкоэкспертизы, данное заключение теряет свою силу, и заказчиком необходимо получить соответствующее заключение ГЭЭ в надлежащем порядке.

Заключение государственной экологической экспертизы о допустимости реализации проекта не подменяет и не отменяет необходимость получения соответствующих разрешительных документов в установленном законодательном порядке.

Заказчику необходимо выполнить все природоохранные мероприятия, изложенные в проекте ЗВОС и в данном заключении Госэкоэкспертизы, оформить в надлежащем порядке с ГУП «Тоза худуд» соответствующие договора на вывоз отходов в специальные места, а также осуществлять комплекс мероприятий по охране земель, предусмотренный Земельного Кодекса Республики Узбекистан.

Вырубку деревьев и кустарников согласовать с Управлением по экологии и охране окружающей среды Джизакской области, согласно Постановлением Кабинета Министров Республики Узбекистан за №255 от 31.03.2018 года «Об утверждении некоторых административных регламентов оказания государственных услуг в сфере природопользования».

Инспекцию по контролю в сфере экологии и охране окружающей среды Зааминского района, необходимо осуществлять контроль выполнения предложенных природоохранных мероприятий и требований.

М.П. Начальник управления Э.Холматов.

Исп: Ш.Маликов

Тел (78) 771-69-49

Xulosa raqami 327-Э

Xulosa sanasi 29.09.2021

Tekshirish uchun

APPENDIX 5. CHANCE FINDS PROCEDURE

Purpose

Construction sites could be considered as subject to heritage survey and assessment at the planning stage. These surveys are based on surface indications alone, and it is therefore possible that sites or items of heritage significance will be found in the course of development work. The procedure set out here covers the reporting and management of such finds.

Scope: The "chance finds" procedure covers the actions to be taken from the discovery of a heritage site or item to its investigation and assessment by a trained archaeologist or other appropriately qualified person.

Compliance: The "chance finds" procedure is intended to ensure compliance with relevant provisions of the Law of RUz "On protection and Use of Objective of the Archeological Heritage" (2009). The procedure of reporting set out below must be observed so that heritage remains reported to the Ministry of Archeology are correctly identified in the field.

Responsibility

Operators/Workers - To exercise due caution if archaeological remains are found

Foreman/construction site manager - To secure site and advise management timeously

Contractor's manager - To determine safe working boundary and request inspection

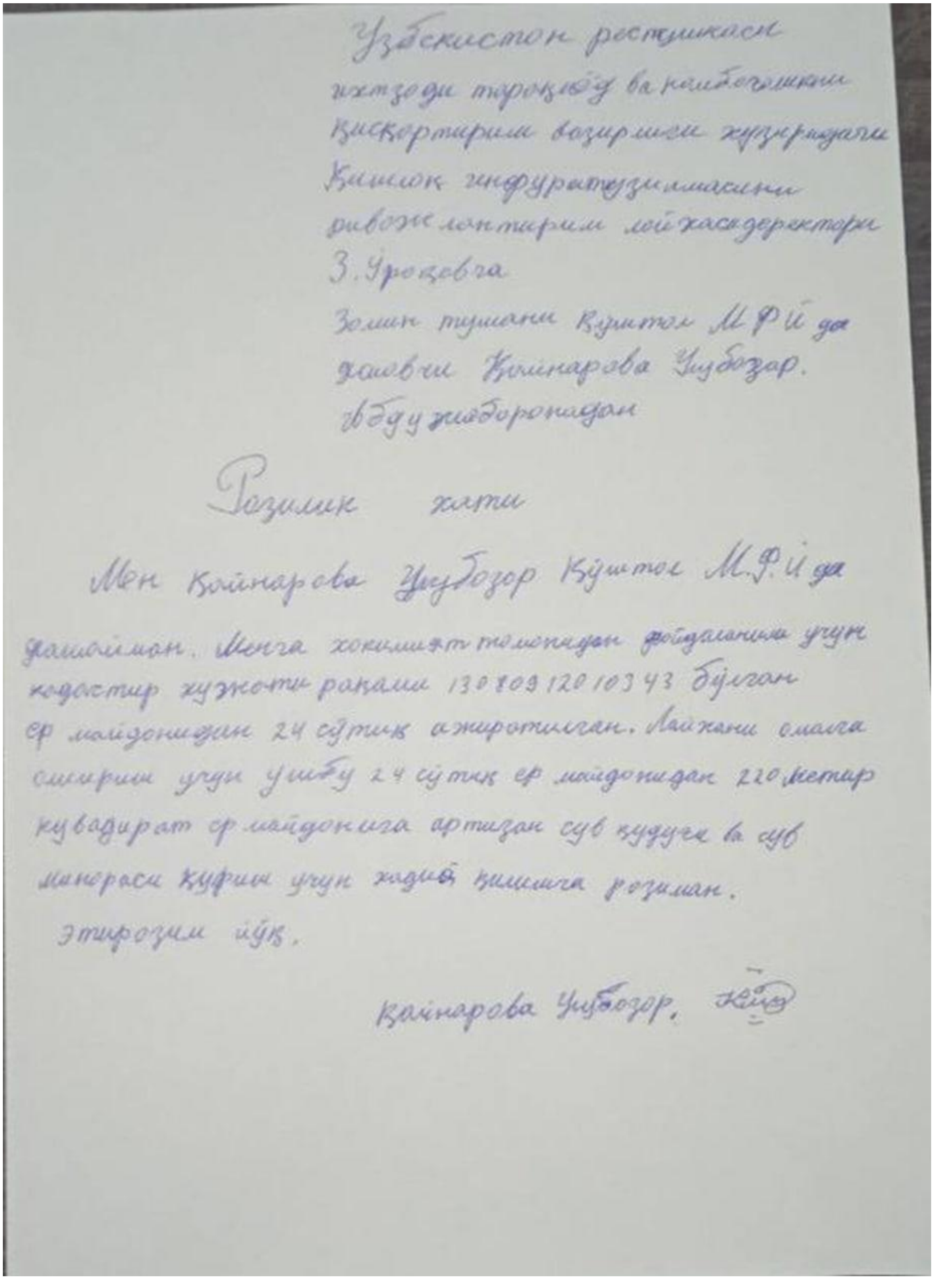
Archaeologist: To inspect, identify, advise management, and recover remains

Procedure

MITIGATION/MONITORING ACTION	RESPONSIBILITY	SCHEDULE
Should a heritage site or archaeological site be uncovered or discovered during the construction phase of the project, the "change find" procedure should be applied. The details of this procedure are highlighted below:	Person identifying archaeological or heritage material	When necessary.
• If operating machinery or equipment: stop work • Identify the site with flag tape • Determine GPS position if possible • Cease any works in immediate vicinity	Person identifying archaeological or heritage material	

• Report findings to foreman • Report findings, site location and actions taken to superintendent	Foreman/construction site manager	
• Visit site and determine whether work can proceed without damage to findings • Determine and mark exclusion boundary • Site location and details to be added to project GIS for field confirmation by archaeologist	Contractor's manager	
• Inspect site and confirm addition to project GIS • Advise the Ministry of Culture (MoC) and request written permission to remove findings from work area • Recovery, packaging and labelling of findings for transfer to National Museum	Archaeologist	
• Should human remains be found, the following actions will be required: o Apply the change find procedure as described above. o Schedule a field inspection with an archaeologist to confirm that remains are human. o Advise and liaise with the (MoC)and Police o Remains will be recovered and removed either to the National Museum or the National Forensic Laboratory.	Archaeologist Representatives of Khokimiyat and Ministry of Culture Police	

APPENDIX 6. LETTER OF CONSENTS OF KAYNAROVA ULBOZOR



Ўзбекистон республикаси
иқтисодий тараққиёт ва камбағалликни
қисқартириш вазирлиги ҳузуридаги
Қишлоқ инфратузилмасини
ривожлантириш лойиҳа директори
З.Ўроқовга
Зомин тумани Қўштол М.Ф.Й да
яшовчи Қайнарова Улбозор.
Абдужабборовнадан

Розилик хати

Мен Қайнарова Улбозор Қўштол М.Ф.Й да
яшайман. Менга ҳокимият томонидан фойдаланиш учун
кадастр ҳужжати рақами 130809120 10343 бўлган
ер майдонидан 24 сўтик ажратилган. Лойиҳани амалга
ошириш учун ушбу 24 сўтик ер майдонидан 220 метр
кувадрат ер майдонига артизан сув қудуғи ва сув
минораси қуриш учун ҳадия қилишга розиман.
Эътирозим йўқ.

Қайнарова Улбозор. [signature]

Unofficial translation.

To the project director
from citizen Kaynarova Ulbozor
Street living at Solomensky district,
Kushtiryak mahalla

A letter of consent.

I Kaynarova Ulbozor own land (cadastre No. 13080912010343) 24 acres.
I am donating 220 square meters for the construction of a water well and a water tower.
I have no complaints.

Kaynarova Ulbazar

Ўзбекистон Республикаси
Иқтисодий тараққиёти
ва камбағалликни қисқартириш
Вазирлиги ҳузуридаги қишлоқ
инфратузилмасини лойиҳасини
амалга ошириш гуруҳи
директори З. Уроқовга
Зомин тумани Тўғизол қиш
да яшовчи Баннарова
Ибозордон

Розилик хати

Менга тегишли бўлган туман хожирасидаги ер майдонидаги девор билан ўралган томларни давлат лойиҳасига кўра бузилишига розиман

Т. Баннарова [signature]

Unofficial translation

Project Director
from citizen Kainarova Ulbozor
living in the Zomin district,
Kushtol mahalla

Letter of consent.

I have no complaints and agree to the transfer of my fence, which is located on land belonging to the khokimiyat (empty land)

Kainarova U.

APPENDIX 7. THE LETTER FROM THE KHOKIMIYAT

O'ZBEKISTON RESPUBLIKASI QURILISH VAZIRLIGI
JIZZAX VILOYAT QURILISH BOSH BOSHQARMASI
ZOMIN TUMANI QURILISH BO'LIMI

708120, Zomin shaharchasi, O`rda ko'chasi, uy Tel: (72) 392-17-99, zominarxitekturasi@umail.uz, www.jizarxitektura.uz

№ 296.
"13" 12. 2021-yil

Ўзбекистон Республикаси Иқтисодий Тараққиёт ва Камбағалликни Қисқартириш Вазирлиги Хузуридаги Қишлоқ Инфратузилмасини Ривожлантириш лойихаси директори З.Ўроқовга

МАЪЛУМОТНОМА

Зомин туман Қурилиш бўлими Сизга шуни ёзиб маълум қиладики, Ўзбекистон Республикаси Президентининг 2020 йил 25-ноябрдаги "Жахон банкининг Халқаро тараққиёт уюшмаси ва Осиё инфратуизилмавий инвестициялар банки иштирокида қишлоқ инфратузилмасини ривожлантириш лойихасини амалга ошириш чора-тадбирлари тўғрисида"ги ПҚ-4898-сонли қарорига асосан Зомин тумани Нурликент МФЙдан 2 та сув қудуғи ва 2 та сув минораси хамда Қўштол МФЙдан 3 та сув қудуғи ва 3 та сув минораси учун хар бир қудуққа танланган 30х30 метр ўлчамдаги ер майдони туман захираси ер майдонида жойлашганлигини маълум қиламиз.

Зомин тумани қурилиш бўлими бошлиғи **А.Ғаниев**

Unofficial translation.

REFERENCE

As part of the project implementation, according to the Decree of the President of the Republic of Uzbekistan on measures for the implementation of the Rural Infrastructure Development project with the participation of the International Development Association of the World Bank and the Asian Infrastructure Investment Bank, No. PP-4898 dated November 25, 2020, the transferred land for 3 wells and 3 water towers in the Kushtol mahalla 30 by 30 meters for each is in reserve (empty land), about which this certificate is compiled**.**

Deputy Khokim of Zoomin district **Ganiev A.**