Initial Environmental Examination

June 2022

Uzbekistan: Integrated Urban Development Project (Water Supply and Sanitation Subcomponent)

Volume I: Main Report

Prepared by Ministry of Investments and Foreign Trade of the Republic of Uzbekistan for the Asian Development Bank.

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CURRENCY EQUIVALENTS

(as of 1 June 2022)

Currency unit	–	Uzbekistan Sum (UZS)
UZS1.00	–	$0.000091
$1.00	–	UZS10,012.23

ABBREVIATIONS

ADB	-	Asian Development Bank
AMS	-	Asset Management System
ACMMP	-	Asbestos-Containing Materials Management Plan
AASL	-	Aydar-Arnasay System of Lakes
AASHTO	-	American Associations of State Highway and Transportation Officials
ASEWPH	-	Agency for Sanitary and Epidemiological Welfare and Public Health
BMP	-	Building Materials Plant
CCMP	-	Construction Camps Management Plan
CNR	-	Construction Norms and Rules
COVID-19	-	Coronavirus Disease
CSEE	-	Center of the State Environmental Examination
DED	-	Detailed Engineering Design
DMA	-	District Metered Area
EHS Guidelines	-	the World Bank Group's Environment, Health and Safety Guidelines
EIS	-	Environmental Impact Statement
EMP	-	Environmental Management Plan
FTA	-	Federal Transit Administration
GHG	-	Greenhouse-Gas
GIS	-	Geographic Information System
GRM	-	Grievance Redress Mechanism
IBA	-	Important Bird Areas
IEE	-	Initial Environmental Examination
IFC	-	International Finance Corporation
ISAAC	-	Institutional Strengthening, Sustainability and Awareness Consultant
IUCN	-	International Union for Conservation of Nature
IUDP	-	Integrated Urban Development Project
JSC	-	Joint Stock Company
LARP	-	Land Acquisition and Resettlement Plan
LLC	-	Limited Liability Company
MAC	-	Maximum Allowance Concentrations
MAD	-	Maximum Allowable Discharge
MIFT	-	Ministry of Investments and Foreign Trade of the Republic of Uzbekistan
MPC	-	Maximum Permitted Concentration
NGO	-	Non-Governmental Organization
OHSP	-	Occupational Health and Safety Plan
OHSE	-	Occupational Health and Safety Engineer
PEIS	-	Preliminary Environmental Impact Statement
PIU	-	Project Implementation Unit
PIU-NES	-	Project Implementation Unit – National Environmental Specialist
PMDSC	-	Project Management and Design Supervision Consultant
PMSC	-	Project Management Supervision Consultant
PMSC-IES	-	Project Management and Supervision Consultant International Environmental Specialist
PMSC-NES	-	Project Management and Supervision Consultant National Environmental Specialist
PPE	-	personal protective equipment
RCCE	-	Risk Communication and Community Engagement

RCM	-	Resolution of Cabinet Ministries
REA	-	Rapid Environmental Assessment (ADB checklist)
RUz	-	Republic of Uzbekistan
SAS	-	Swiss Association of Standardization
SAEMR	-	Semi-Annual Environmental Monitoring Report
SanN&R	-	Sanitarian Norms and Rules
SCADA	-	Supervisory Control and Data Acquisition system
SCEEP	-	State Committee on Ecology and Environmental Protection
SEC	-	Statement on Environmental Consequences
SEE	-	State Environmental Expertise
SEWPHS		Sanitary-Epidemiological Welfare and Public Health Service
SIZ	-	Specialized Industrial Zone
SPS	-	Safeguard Policy Statement
SSEMP	-	Site Specific Environmental Management Plan
TMP	-	Traffic Management Plan
TRTA	-	Transaction Technical Assistance
UGISC	-	Urban Governance & Institutional Strengthening Consultants
UNFCCC	-	United Nations Framework Convention on Climate Change
WHO	-	World Health Organization
WSS	-	Water Supply and Sanitation
WWTP	-	Wastewater Treatment Plant

WEIGHTS AND MEASURES

km^2	–	square kilometer
kMh	–	kilowatt hour
dB	–	decibels
kV	–	kilovolts
km	–	kilometer
mm/s	–	millimeters per second
mg/m^3	–	milligram per cubic meter
mg/m^3	–	micrograms per cubic meter
mg/dm^3	–	milligram per cubic decimeter
ºC	–	Celsius degree
mg/kg	–	milligram to kilogram
m	–	meter
MVA	–	mega volt ampere
ha	–	hectare
mm	–	millimeter
m^3/s	–	cubic meter per second
g/l	–	gram per liter
km^2	–	square kilometer
g/m^3	–	gram per cubic meter

GLOSSARY

BR&N	Building Rules and Norms
Glavgosexpertisa	State department responsible for environmental expertise Under the State Committee for Ecology and Environmental Protection
Goskomgeodezkadastr	State Committee for Land Resources, Surveys, Cartography, and the State Cadastre
Goskomgeologia	State Committee for Geology and Mineral Resources
Goskompriroda	State Committee for Ecology and Environmental Protection
Khokim	Governor of municipality
Khokimiyat	Regional or district government authority
KMK	National acronym for construction norms and regulations
Mahalla	Independent and selfgoverning community of neighbors
Oliy Majlis	The Supreme Assembly, comprising the Legislative Chamber and the Parliament
OVOS	National acronym for environmental assessment process
O'z DSt	National acronym for state standard of the Republic of Uzbekistan
PZVOS	National acronym for concept statement on environmental impact
Sanoatgeokontekhnazorat	State Inspectorate for Exploration Supervision, Operations Safety Supervision of Industry, Mining and Utilities Sector
SanR&N	Sanitary and epidemiological norms and regulations
Som	Local currency
SNiP	Set of basic regulatory requirements and regulations governing the design and construction in all sectors of national economy of Uzbekistan
Suvokova	Provincial water supply and sanitation utilities mandated to deliver Water Supply and Sanitation (WSS) improvements within each province of Uzbekistan
Uzhydromet	State governing body in the field of hydrometeorology in the Republic of Uzbekistan under the Cabinet of Ministers
Uzsuvtaminot	National Joint Stock Company responsible for water supply and sanitation
ZVOS	National acronym for environmental impact statement
ZEP	National acronym for environmental consequences statement

NOTE

In this report, "$" refers to US dollars.

EXECUTIVE SUMMARY

1. In 2019, the Government of Uzbekistan has requested the Asian Development Bank (ADB) to support urban development projects in accordance with the National Urbanization Program, which was adopted later in the same year as part of National Development Strategy to 2030. The proposed Integrated Urban Development Project (IUDP) scheduled for loan approval in 2022, according to the ADB Country Operations and Business Plan for 2020-2022 is the outcome of this request.

2. This will be the first ADB-supported integrated urban development project in Uzbekistan. A Transaction Technical Assistance (TRTA) was provided by ADB for preparation of the project's Feasibility Study Report which includes the main report, technical due diligence (technical analysis) and other safeguard reports.

3. As a part of its request to ADB for project preparation assistance, the Government has selected Khiva, Djizzak, Yangiyer and Havas cities (Figure 1) as the pilot cities to be developed under different scenarios and has an intention to replicate their results nationwide.

4. Due to complexity of the project and to simplify its impact assessment, all activities were grouped in three subcomponents:

(i) Water Supply and Sanitation (WSS) in Djizzak;
(ii) Urban Development Component in Havas, Khiva, and Djizzak;
(iii) Solid Waste Management in Djizzak, Khiva, Havas and Yangiyer.

5. For each subcomponent, a separate initial environmental examination (IEE) has been prepared. This IEE presents impact assessment of the first subcomponent – WSS in Djizzak.

6. **Djizzak: Smart water pilot and sanitation in three mahallas (Ittifoq, Dustlik, Yoshlik).** This subproject will support: (i) reconstruction of 4.29 km of water supply distribution networks (Ø50-225mm) with rehabilitated household connections to 69 multi-story buildings (2,590 households) and 30 single-family houses in Ittifoq; (ii) construction of 16.69 km of water supply distribution network (Ø32-160mm) and new household connections to 3 multi-story buildings (36 households) and 890 single-family houses in Dustlik, and; (iii) construction of 14.13 km of sewerage pipelines (Ø160-630mm) and house connections for 775 households in Dustlik. A smart pilot will be implemented to demonstrate international good practice in reducing non-revenue water through a District Metered Area (DMA) approach involving the installation of inlet chambers, valves, smart bulk water and mechanical consumer meters to create 6 DMAs in the project mahallas. All facilities will be owned and operated by Djizzak Suv Taminoti, LLC. This subproject will benefit 4,598 households (2,620 Ittifoq, 926 Dustlik, 1,052 Yoshlik).

7. **Djizzak: Modernizing and improving bulk water supply and distribution system for Djizzak city.** This subproject will improve the transmission, distribution, and monitoring of safe drinking water to Djizzak city support universal and smart metering of piped water consumption and includes (i) rehabilitating 9.4km water conduit from Amir Timur water intake to Sanzar water intake (Ø600mm, steel pipe) and 3.1km to Djizzak city (Ø700mm, steel pipe) with electrochemical protection; (ii) rehabilitating 22.2 km and constructing 5.21 km of distribution pipelines varying from Ø160-710mm, including 15 pressure regulators and 22 air valves, in central Djizzak; (iii) implement a Supervisory Control And Data Acquisition (SCADA) system to optimize remote monitoring of water production; (iv) support installation of automation equipment at Amir Timur and Sanzar intakes, 5 water distribution centers, 4 local wells and 1 booster pumping station, installation of 72 smart bulk water meters, installation of frequency controlled pumps and water disinfection system at 4 wells; (v) establish a Geographic Information System (GIS) and hydraulic model for the Djizzak city-wide water supply network; (vi) implement an Asset Management System; (vii) conduct Energy Audits; (viii) purchase of Operation and Maintenance Equipment (2 emergency recovery vehicles, 2 excavators, 1 truck mounted crane, 1 waste truck, 1 mini bus, 2 Dmas Labo, 1 trialed pneumatic mobile air compressor, PVC welding equipment, 1 pipe detector, 1 mobile power generator, 1 welding machine); (ix) construction of fencing for Amir Timur water intake, and; (x) repair of chlorination equipment for Sanzar water intake.

8. **Djizzak: Hygiene measures to address COVID-19.** This subproject will construct 5 public toilets in public areas. These physical measures will be complemented by behavior change awareness campaigns.

9. **Implementation Arrangements.** Ministry of Investment and Foreign Trade (MIFT) is the executing agency responsible for overall project coordination with government agencies and high-level decision-making authorities to ensure timely implementation, and for liaison with ADB and other development partners. Other related to this subcomponent stakeholders include hokimiyats, Uzsuvtaminot Joint Stock Company (JSC) [1], Djizzak Suvtaminot LLC, Djizzak branch of the State Committee on Ecology and Environmental Protection of Uzbekistan (SCEEP), Toza Hudud State Unitary Enterprise, which will be involved in evaluation process to ensure their active involvement during project implementation.

10. The MIFT-PIU will appoint three PIU Field Coordinators for Khiva, Djizzak city and Havast/Yangiyer respectively to supervise and monitor project activities including safeguards implementation on the ground, together with Project Management and Supervision Consultant (PMSC, second part of assignment of Project Management, Design and Supervision Consultant [PMDSC]).[2] There will also be a local coordination committee comprised of project stakeholders, who will meet on a semi-annual basis (or as needed) to review project progress and ensure timely implementation.

11. The MIFT-PIU will be responsible for implementation of EMP to comply with ADB safeguards requirements and environmental national regulations. The PIU will hire one full time National Environmental Specialists (PIU-NES) exclusively for this project, who will be assisted by the PMSC's international environmental specialist (PMSC-IES) and full-time national environmental specialist (PMSC-NES) in the process of overseeing the implementation of the EMP.

12. The Contractors will be responsible for mitigation measures during construction phase. During construction, the Contractors will retain their expertise of a full-time and qualified Environmental Engineer and a full-time Occupational Health and Safety Engineer (OHSE) to implement and update the Site-Specific Environmental Management Plans (SSEMPs), and to report on the mitigation measures throughout the contract period.

13. **Project Category**. In accordance with ADB Safeguard Policy Statement (SPS, 2009), the Project is classified as Category B for environment, as a project will have site-specific impacts, some of which are irreversible, and in most cases the mitigation measures can be readily designed. The Project therefore requires an IEE, based on data from the Feasibility Study, preliminary design and site visits, and interviews with technical experts, as well as primary and secondary data including feedback received during the public consultations. The IEE also includes due diligence of the existing water intakes (Amir Temur and Sangzar groundwater intakes) where some part of the main pipeline will be rehabilitated under the project. The Corrective Action Plan was prepared to bring performance of these facilities in compliance with the environmental requirements. These facilities are owned by Djizzak Suvtaminot LLC. The cost required for the implementation of the corrective actions will be either part of the Project or expenses of the Djizzak Suvtaminot LLC. (see Table 22).

14. The national environmental regulation requires conducting three separate environmental impact assessments for the following scopes of the subcomponent: (i) upgrading of water supply system in Ittifoq and Dustlik mahallas, (ii) reconstruction of sewage network in Dustlik mahalla, and (iii) reconstruction of transmission pipeline. In accordance with

[1] National water supply and sanitation agency.

[2] Project Management, Design and Supervision Consultant (PMDSC) was hired to implement consultancy service consisted of two parts: Part 1: Detail Engineering Design (DED) and Procurement Support and Part 2: Construction Supervision, Project and Contract Management. PMSC's TOR says "*On successful completion of Part 1 and towards award of works for Part 2 work with suitably modified TOR and additional staffing as required*." Therefore, after the completion of the design works Part 1 of the task - the DED component will end and the implementation of Part 2 will begin. During Part 2, the consultant will act as Project Management and Supervision Consultant (PMSC). During the IEE preparation, the name of consultancy under Part 2 "Construction Supervision, Project and Contract Management" was changed to the PMSC.

the national environmental categorization requirements, the subcomponent is classified as Category III (low risk) – projects with low environmental impact. Three Preliminary Environmental Impact Statements (PEISs, environmental assessment document required for Category III projects or PZVOS[3]) were prepared by MIFT-PIU (with support of a national company) and submitted by the Djizzak Suvtaminot LLC to the SCEEP in Djizzak province in November 2021. Mitigation measures identified in the PEISs are included in this IEE. Environmental Appraisals (Environmental Permission) were obtained in March 2022 (Appendix **1.** The Environmental Appraisal of State Environmental Expertise: Preliminary Environmental Impact Statement (PEIS)).

15. **Due Diligence**. The project will be implemented in the inhabited area which has modified the ecosystem. There are no protected areas, species included in the Red Book of Uzbekistan or International Union for Conservation of Nature (IUCN) Red List and historical heritage within the project area.

16. **Project Impacts**. Evaluation of the project impacts has been done using an impact significance matrix, which is a combination of receptors' sensitivity and impact magnitude. The sensitivity of each environmental and social receptor was defined. Further assessment of the impact magnitude was done with consideration of duration, probability, extent, and frequency of each impact. The following impacts were assessed for each type of project activity: direct, indirect, and cumulative.

17. All anticipated environmental impacts have been assessed at three stages – pre-construction, construction, and operation. At the pre-construction stage, it will be imperative to ensure that all necessary permissions for the project are secured and received from government agencies, and that the IEE is updated if any unanticipated environmental impacts become apparent, to reflect any modifications, such as changes in the project design, scope etc., if any.

18. **Construction Period.** During the construction period, the main impact will be related to the generation of wastes, increased noise level and pollutant emissions from machinery. All impacts will be short term. However, due to location of the project sites within the populated areas, these impacts will have to be mitigated and monitored. A baseline monitoring of air quality and noise levels has been implemented at the points located next to the sensitive receptors, such as schools, kindergarten, and hospital. The Contractor will be required to ensure a continuous monitoring of these parameters during construction in accordance with an Environmental Monitoring Plan (EMoP) included in this IEE.

19. The main pipeline crosses Sangzar river at two points. Impact on water resources will not be significant. The appropriate mitigation measures for preventing pollution during the construction are specified in the EMP.

20. Impact on biodiversity will occur mainly in form of losses of crops and fruit trees. All these losses will be compensated in accordance with Land Acquisition and Resettlement Plan (LARP) which was developed under the TRTA. There are no species included in the national Red Book or Red List of IUCN on the project area. The impact on trees will be insignificant, as during the DED, the water conduit's route with minimal impact on the trees was selected by the Detail Engineering team.

21. It is anticipated that during the construction phase a substantial volume of wastes will be generated. Most of them will be non-hazardous and will be old pipes, removed asphalts covering roads (most of rehabilitated pipelines are under existing roads). Contractor will have to develop a Traffic Management Plan (TMP) in accordance with the provided template (**Appendix 4.** Template of Traffic Management Plan). There is a possibility that some asbestos wastes could be generated during demolishing of few buildings during construction of main pipeline. The PMSC-IES/NES together with Contractor will examine the buildings which are intended for removal and in case of presence of any asbestos materials, an Asbestos

[3] PZVOS is Russian translation of Preliminarily Environmental Impact Statement (PEIS) – 1st stage of national Environmental Impact Assessment Procedure

Materials Management Plan will have to be developed, also in accordance with the recommended template. Asbestos wastes will be disposed at the Djizzak city municipal landfill in accordance with procedure indicated in the national regulation.

22. Another noticeable impact will be related to health and safety of the communities and contractor workers. The impacts are related to the risks of opening trenches, more intensive movement of vehicles, and hindered access to houses and commercial facilities. Since a major part of the civil works will be implemented in the densely populated areas, the implementation of all relevant measures provided in the EMP will be crucial to avoid any negative impact.

23. During the construction phase, labor camps may be located within the residential areas, or suitable open spaces. Location of any camps within the premises of the groundwater intakes are prohibited. To ensure proper camp operation, the Contractor will develop a Construction Camp Management Plan (CCMP) and ensure its proper implementation.

24. Besides impacts on air, water and soil quality, some other risks also relate to both community and occupational worker health and safety. Safe working conditions, together with compliance with sanitary, fire protection and other construction norms and requirements, will be strictly adhered to prevent electrical shocks and other accidents during the construction period. Each Contractor will be required to develop an Occupation Health and Safety Plan, which will cover such requirements as the usage of Personal Protective Equipment (PPE) and fire protection equipment, proper handling of fiber cable, and participation in a training program. To address COVID-19 risks, COVID-19 Health and Safety Management Plan and emergency response plan will be developed as part of the SSEMP.

25. All national regulations related to the construction works and the World Bank Group's *Environment, Health and Safety Guidelines* (EHS Guidelines)[4] will have to be complied with. The MIFT-PIU will closely coordinate with the communities regarding the planning and implementation of project works.

26. **Operation Phase**. During the operation, the project potential negative impact will be limited with generation of hazardous wastes and over extraction of groundwater from the water intakes. The hazardous wastes will be in a form of used bactericidal lamps which will be installed for water disinfection at four rehabilitated wells. The lamps will have to be replaced per one in two years.

27. Two groundwater intakes included in the project scope have a water use limit. The volume of extracted groundwater from wells located at the groundwater intakes will not exceed the established limits. Otherwise, any over extraction may lead to depletion of the groundwater deposits.

28. In general, the project will have significant, positive socioeconomic benefits by increasing the access to safe water supply services in Dustlik and Ittifoq mahallas and district sewage services in Dustlik mahallas.

29. **Information Disclosure.** Preparation of this IEE coincided with the COVID-19 lockdown period. During this period, any meetings with public were limited to avoid gathering of people and to prevent spread of COVID-19. In order to prevent large numbers of people from gathering together and the spread of COVID-19, meetings were held with the main stakeholders in accordance with all precautions. The community meetings were held in a narrow format. The main components of the Project subcomponent, expected environmental and social impacts, proposed mitigation measures, Grievance Redress Mechanism (GRM), principles and contacts for feedback were discussed with the leaders of the affected mahallas and with several residents.

30. To deliver information about the project, its potential environmental and social impacts, and proposed GRM, TRTA consultants prepared leaflets with brief information regarding these topics. In addition, the leaflets provided some information on the type of mitigation measures, entitlement matrix for compensation calculations, and contact details for clarifications and

[4] Environmental, Health, and Safety Guidelines (ifc.org)

grievance. The leaflets were distributed in August 2021 in the settlements located along the main pipeline route and were placed at the entrance of the administration buildings of three mahallas and other public places, such as schools, market bus station, etc. Public Consultations were held on 14 October 2021 in 7 mahallas of Djizzak (Amir Temur, Bogishamol, Dustlik, Yoshlik, Ittifoq, Sangzor and Toshlihol) by PIU within the preparation of national PEIS (**Appendix** 8. Minutes of Public **Consultations** within **the** national EIS

31. Appendix 9. Record of public consultations (List of the participants and photos from meetings).

32. To receive feedback of project stakeholders, a special group was created in Telegram social media covering main stakeholders and mahalla leaders. Moreover, the leaflets were posted on the Uzsuvtaminot JSC's website in both Uzbek and Russian languages. Full version of IEE will be translated in Russian and the summary of IEE will be translated into Uzbek, including Executive Summary, EMP and GRM. All translated documents will be posted on MIFT-PIU website[5] (Table 35). The final IEE report translated into Russian and Uzbek will also be sent to the Djizzak branch of the SCEEP, and administrative units in the project area.

33. The MIFT-PIU will be responsible for supervision and monitoring of EMP implementation to comply with ADB SPS and national environmental regulations. The PIU will hire one full time National Environmental Specialist (PIU-NES) designated to this project, who will be assisted by the PMSC-IES/NES in overseeing the EMP implementation.

34. Contractors will be responsible for mitigation measures during the construction phase. The Contractors will hire their 2 full-time qualified engineers: (i) environmental engineer and (ii) OHSE. The environmental engineer will be responsible for in time preparation, implementation and updating of the SSEMPs and reporting on the mitigation measures performance throughout the contract period. The OHSE will be in charge for implementation of occupational health and safety requirements, insuring proper setting up of construction camps and implementation of COVID-19 requirements during the construction period.

35. Costs for EMP implementation will cover the following activities: (i) implementation of the instrumental environmental monitoring of air, water, and noise levels by Contractors, (ii) implementation of the environmental measures as indicated in the EMP, and (iii) implementation of the capacity building and awareness programs.

36. This IEE will be updated if any unanticipated environmental impacts become apparent based on results of the DED. The updated IEE will be submitted to ADB for clearance and disclosure on ADB's website.

[5] MIFT PIU's website link: https://cutt.ly/2Pv5A1v

I. INTRODUCTION

A. Project Overview

1. In 2019, the Government of Uzbekistan has requested the Asian Development Bank (ADB) to support urban development projects in accordance with the draft National Urbanization Program, which was adopted later in the same year as part of National Development Strategy to 2030. The proposed Integrated Urban Development Project (IUDP) scheduled for loan approval in 2022, according to the ADB Country Operations and Business Plan for 2020-2022 is the outcome of this request.

2. The project is aligned with: (i) the National Development Strategy for 2017–2021[6]; (ii) ADB's Country Partnership Strategy for Uzbekistan, 2019–2023; (iii) Central Asia Regional Economic Cooperation (CAREC) Tourism Strategy 2030; (iv) ADB's Strategy 2030 Operational Plan (OP) for Priority 1 (poverty, inequality), OP2 (gender equality), OP3 (climate change, environment), OP4 (livable cities), OP6 (governance, institutional), OP 7 (regional)[7]; and (v) Urban Sector Group Guidance Note on post COVID-19 livable cities. It is included in the ADB's Country Operations and Business Plan for Uzbekistan 2021–2023.

3. Urban population of Uzbekistan (16.8 million) declined from 51.5% in 2010 to 50.5% in 2019, indicating a lagging trend of urbanization. More than a half of the population is concentrated in its easternmost regions around the capital city of Tashkent and Fergana Valley, an industrial center that shows a significant regional imbalance. While a considerable share of the urban population lives in the large cities, the fastest population growth rate (54%) was observed in the medium- sized cities in 1990-2017. The recent lifting of internal mobility restrictions, a large youth population, and a growing share of urban job opportunities (manufacturing, construction, services) are expected to make migration to cities more intensive. However, following a business-as-usual approach of unregulated growth and limited investments will result in urban services, being under pressure now, will continue to be overburdened.

4. Recognizing the pivotal role that well-planned, efficient cities play in broad-based, inclusive growth, the Government enacted sustainable urbanization as a development priority with the goal of increasing urbanization to 60% by 2030. In 2020, the Government established the Department of Urbanization Policy Development under the Ministry of Economic Development and Poverty Reduction to govern its urban agenda. The related reforms include a new Urban Planning Code requiring public participation, fiscal decentralization, and new agencies for public–private partnership, water supply, solid waste management, and cadaster.

5. This will be the first ADB-supported integrated urban development project in Uzbekistan. A TRTA was provided by ADB for preparation of the project's Feasibility Study Report which includes the main report, technical due diligence (project technical analysis) and other safeguard reports.

6. As a part of its request to the ADB for project preparation assistance, the Government has selected Khiva, Djizzak, Yangiyer and Havas cities (**Figure 1,** below) as the pilot cases under different development scenarios and has an intention to replicate their experience nationwide.

[6] Government of Uzbekistan. 2017. Presidential Decree No. 4947. On Strategy of Actions for Further Development of the Republic of Uzbekistan. Tashkent.

[7] https://www.adb.org/sites/default/files/institutional-document/495951/strategy-2030-op1-poverty-inequalities.pdf

Figure 1: Project cities

7. The project will be aligned with the following impact: sustainable urbanization and improved welfare of the urban population; and the following outcome: improved access to inclusive, resilient, and sustainable urban services in the secondary cities. The project's expected outputs are:

8. **Output 1: Inclusive municipal and tourist infrastructure and services provided.** The project will: (i) develop a new 6 hectare (ha) public park in Havast with green space, multifunctional community center including public library and livelihood training facility to support skills development for small and medium-sized enterprises targeting women and youth; (ii) construct a new two-story visitor center in Khiva featuring Uzbekistan's first digital museum showcasing Silk Road-themed heritage, and with women-friendly facilities and bicycle rental;[8] (iii) create a new 2.4 kilometer (km) linear public greenway in Khiva linked to the new visitor center along an existing irrigation canal with cycle and pedestrian paths, green space, street furniture, signage, and playgrounds; and (iv) demonstrate holistic area-based development in three underserved communities (mahallas) (Ittifoq, Dustlik, Yoshlik) in Djizzak through the integrated development of street corridors including surfaces, drainage, pavements, lightings, pedestrian sidewalks, public open spaces with neighborhood parks and playgrounds, and a bus stand, and include water supply and sanitation (WSS) improvements under Output 2. All facilities will be designed with universal access for persons with mobility impairments and feature women-friendly designs. Assets under Output 1 will be owned and operated by local governments.

9. **Output 2: Climate-resilient drinking water, sanitation, and solid waste services enhanced with smart systems.** In Djizzak city the project will (i) support universal coverage of basic WSS services in three underserved mahallas (Ittifoq, Dustlik, and Yoshlik) through the development of around 21 km of distribution networks with metered house connections, construction of around 14 km of sewerage networks with house connections,[9] and a smart

[8] The visitor center, located near the rail station, will complement the ADB rail electrification project between Bukhara and Khiva to boost tourist arrivals. Women-friendly travel services include information on safety and security.

[9] The water and sanitation investments in the three mahallas are part of the comprehensive area-based development approach supported under Output 1, and will benefit 4,598 households (2,620 Ittifoq, 926 Dustlik, 1,052 Yoshlik). The three mahallas have not received support from other government or donor funded urban development programs.

water pilot demonstrating NRW management in six new district metered areas;[10] (ii) improve the bulk water supply transmission, distribution, and monitoring system for Djizzak city through the development of around 12.5 km of water transmission pipelines and around 27 km of distribution pipelines, installation of ultrasonic bulk water meters, energy efficient variable frequency controlled pumps, water disinfection systems, new pressure regulators and air vent valves, and improve two intake facilities (chlorination equipment, fencing), installation of a Supervisory Control and Data Acquisition (SCADA) system to optimize remote monitoring of water production, establishment of a geographic information system (GIS) hydraulic model for the Djizzak city-wide water supply network, implementation of an asset management system, energy audit, and purchase O&M equipment. In the four cities, the project will implement a WASH+H program by providing toilet and handwashing facilities at project-area public facilities (schools, hospital, public spaces) complemented by community awareness and behavior change campaigns.[11] The project will enhance SWM services in the four cities as follows: (i) provide collection equipment and waste containers; (ii) construct total 25 community collection points in Yangiyer and Havast;[12] (iii) construct a shared transfer station for Havast and Yangiyer located in Havast; and (iv) implement a public awareness campaign on waste minimization and recycling in all four cities. Assets under Output 2 will be operated by the respective utility operators.

10. **Output 3: Urban governance, institutional capacity, and livelihood support strengthened.** The project will provide a structured capacity development program to improve sustainability, operational efficiency, and services delivery in the four project cities. The four city governments will receive comprehensive training in integrated urban development including strategic planning and budgeting, municipal finance, asset management, O&M, e-governance, citizen participation, and private sector cooperation. The water operator in Djizzak will receive training in key areas of utility management including O&M, asset management, business development, financial management, service standards, digital tools, operational efficiency, and customer service. The solid waste operators and communities will be exposed to waste minimization and reduce, reuse, recycle (3R) awareness campaigns. This output will also support livelihood programs in tourism, among other areas for local businesses and residents in the project area targeting women and youth. Output 3 will be supported by the urban governance and institutional strengthening consultants, and TA experts in municipal finance, tourism, and livelihood development.[13]

11. Due to complexity of the project and to simplify a process of environmental assessment, all activities were grouped in three subcomponents:

(i) WSS in Djizzak;

(ii) Urban Development Component in Havas, Khiva, and Djizzak;

(iii) Solid Waste Management in Djizzak, Khiva, Havas and Yangiyer.

12. For each subcomponent a separate IEE has been prepared. This IEE presents impact assessment results of the first subcomponent – WSS in Djizzak.

[10] The smart water pilot will be implemented in close coordination with the proposed United States Trade and Development Agency (USTDA) grant-funded pilot on digital twin technology for remote monitoring of pressure and leaks in the pilot area. This USTDA pilot is a scaling up of a successful demonstration activity supported by a grant under ADB's Digital Innovation Sandbox Grant Program (2020–2021) in Tashkent Province.

[11] ADB. 2020. *Technical Assistance for the COVID-19 Infection Prevention and Control through an Integrated Water, Sanitation, Hygiene, and Health Approach*. Manila (TA 6612-REG). This TA supports an awareness building and behavior change program in project cities. Toilet facilities will be maintained by building owners or city government.

[12] Waste collected in the four project cities will ultimately be disposed in new regional landfills being planned in parallel by the government with commissioning planned around the time of the project completion.

[13] ADB. 2020. Support to the Implementation of Strategy 2030 Operational Plans. Manila (TA 6574-REG). This TA supports capacity building in municipal finance and financial sustainability in the project cities. Other TA support for Output 3 in areas of tourism and livelihood support will be provided by the RCIF-funded TA (para 22).

B. Environmental Assessment Requirement

1. National Requirements

13. The national Law “On Environmental Expertise” and the Resolution of Cabinet Ministries (RCM) of Uzbekistan "On the State Environmental Expertise (SEE)" # 541 dated 2020, requires an environmental assessment for all types of activities which may have environmental impact.

14. For this Project, the regulation requires conducting three separate environmental impact assessments for the following scopes of the subcomponent: (i) upgrading of water supply system in Ittifoq and Dustlik mahallas, (ii) reconstruction of sewage network in Dustlik mahalla, and (iii) reconstruction of transmission pipeline. In accordance with the national environmental categorization requirements, the subcomponent is classified as Category III (low risk) – projects with low environmental impact. Three Preliminary Environmental Impact Statement (PEIS, environmental assessment document required for Category III projects) was prepared by MIFT-PIU (with support of a national company) and submitted by the Djizzak Suvtaminot LLC to the SCEEP in Djizzak province in November 2021. Mitigation measures identified in the PEISs are included in this IEE. Environmental Appraisals (Environmental Permission) were obtained in March 2022 (Appendix **1.** The Environmental Appraisal of State Environmental Expertise: Preliminary Environmental Impact Statement (PEIS)).

2. Purpose of IEE Study

15. This IEE forms a part of preparations for the project. It has been prepared in accordance with ADB SPS, and the Uzbekistan’s Law on Nature Protection (1992) and Law on Environmental Expertise (2000), and other relevant laws, regulations, and requirements. The objective of the IEE is to (i) identify and assess potential project impacts and risks on the physical, biological, cultural, and socio-economic environments of the project area, and (ii) recommend measures to avoid, mitigate and provide compensation for adverse impacts, while enhancing positive impacts. Relevant references, desk assessments, site reconnaissance, community consultations, and discussions with government agencies, Non-Governmental Organizations (NGOs) and other stakeholders have provided the basis for the IEE preparation.

16. The Project has been screened and classified by the ADB as Environmental Category B, and accordingly requires an IEE, including an EMP.

3. IEE Structure

17. The IEE is structured in accordance with ADB SPS. It consists of an executive summary, eleven chapters, and attachments. It has been prepared based on the infrastructure design undertaken by technical experts; primary surveys and secondary data collection and analyses carried out by environmental, biodiversity, hydrogeology, and social experts; and public and stakeholder consultations. Briefly, each section provides the following information:

- **Executive Summary:** Summary of the main aspects related to the environment and project details, highlights of mitigation and residual significant effects, recommends mitigation measures.
- **Policy, Legal, and Administrative Framework:** Summarizes the project policy context. Provides information on legislation and national and international standards applicable to the project and the receiving environment. Gap analysis, compliance with good practices and national legislation;
- **Project Description:** Provides overview of project objectives. Summarizes main elements of the project and key activities which may have some environmental impacts;

- **Description of Environment (Baseline Data)**: Provides description of the relevant environmental and social baseline conditions, information on presence of any protected areas within the project area;
- **Anticipated Environmental Impacts and Mitigation Measures:** Anticipated positive and negative environmental impact assessment. The chapter is based on the findings of the primary and secondary data collection, field surveys, site reconnaissance, stakeholder consultations, applicable sections of the Uzbekistan Environmental Impact Assessment regulations and ADB SPS.
- **Analysis of Alternatives:** Reviews alternatives of various routes of pipelines, meters for water metering and consideration of situation "without project".
- **Information Disclosure and Public Consultations**: Provides concise information on consultation process with data of consultations and summary of comments and concerns. Includes how the project responded to the comments.
- **Grievance Redress Mechanism (GRM):** Includes both environmental and social aspects, updated ADB requirements and relevant national legislation.
- **Environmental Management Plan (EMP):** Defines mitigation measures to avoid or minimize identified potential negative impacts with pointing the responsible parties for EMP implementation. The EMP provides for required institutional arrangements and costs.
- **Conclusion and recommendation:** Provide information about the significant project impacts on the environment.

18. Primary physical and biological baseline data was collected through a range of baseline surveys within the study area as well as from consultation meetings and literature reviews (mainly desk based). Secondary data was collected from Uzbekistan Hydrometeorological Service (Uzhydromet), State Statistic Committee, Institute on Hydrogeology and Geology, Academy of Science of Republic of Uzbekistan (RUz), other governmental and academic institutions and atlases to receive data on topography, demographical situation, and another project relevant information.

19. Project technical description and technology selection decisions were taken from the National Feasibility Study (FS) and International Feasibility Study prepared by TRTA consultants and DED Consultant (footnote 2).

20. Institutional part and GRM were developed in collaboration with the MIFT (Executing Agency), MIFT-PIU (Implementing Agency), stakeholders, and NGOs present in the project area.

4. Environmental Assessment Methodology

21. Impact identification and assessment started with scoping and continued through the environmental assessment process. Any potential significant impacts are subject to a detailed impact assessment. The principal environmental assessment steps included the following:

- **Impact prediction**: Determine what could potentially happen to resources or receptors because of the project and its activities.
- **Impact evaluation**: Evaluate the significance of the predicted impacts by considering their magnitude and likelihood, and sensitivity, value and/or importance of the affected resource or receptor.
- **Mitigation and enhancement**: Identify appropriate and justified measures to mitigate negative impacts and enhance positive impacts.
- **Residual impact evaluation**: Evaluate the significance of impacts assuming effective implementation of mitigation and enhancement measures.

22. The details of the project activities required for the project implementation have been reviewed with assistance of the National Feasibility Study and DED Consultant (footnote 2). The list of the reviewed project activities covers the entire project period from initial contractor mobilization to operation phase of water pipeline, water supply and sewage network. More detail information on impact assessment is provided in Chapter V.

II. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

23. ADB SPS sets out policy principles and outlines the delivery of the ADB's safeguards policy in relation to environmental safeguards. ADB has adopted sets of specific safeguards requirements that borrowers/clients are required to meet in addressing environmental and social impacts and risks. ADB staff will ensure that borrowers and clients comply with these requirements during project preparation and implementation.

24. The safeguard requirements are operation policies that seek to avoid, minimize, or mitigate the adverse environmental and social impacts of projects. ADB safeguard policy framework consists of three operational safeguard requirements: (i) environmental safeguards requirements, (ii) involuntary resettlements safeguards requirements, and (iii) indigenous people safeguards requirements.

25. In accordance with ADB SPS, the project is category B for environment, as the project will have site-specific impacts, some of which are irreversible, and in most cases adequate mitigation measures can be readily implemented. The project requires preparation of an IEE, which will be based on data from the Feasibility Study, preliminary design, site visits and interviews with technical experts, as well as primary and secondary data including feedback received during the public consultation process.

A. National Environmental Requirements

1. National Institutional Framework for Environmental Assessment

26. The SCEEP of the RUz (Goskomekologiya) is the primary environmental regulator. The Goskomekologiya reports directly to the Parliament and is responsible at national, regional (oblast) and local (rayon) levels for the development and enforcement of the national environmental and conservation policy, environmental compliance, integrated environmental management across various sectors, and securing healthy environment conditions across the country.

27. According to its structure, the Goskomekologiya has a central body in Tashkent and regional branches and agencies providing research and technical support. Regional environmental authorities are structured similarly to the Goskomekologiya.

28. The other state agencies involved in the regulation and protection of the environment include:

- Ministry of Water Resources;
- State Committee for Geology and Mineral Resources
- Centre of Hydro-meteorological Service (Uzhydromet);
- Ministry of Health (MoH);
- State Inspectorate for Exploration Supervision, Operations Safety Supervision of Industry, Mining and Utilities Sector (Sanoatgeokontekhnazorat);
- Agency for Sanitary and Epidemiological Well-being (ASEW).

2. National Environmental Assessment Legislation

29. The national environmental assessment procedure is regulated by the Law "On State Environmental Expertise" (SEE) and the Regulation "On further improvement of the environmental impact assessment mechanism", approved by the Resolution of the Cabinet of Ministers No. 541 (2020). The Resolution specifies the legal requirements for environmental assessment documents in Uzbekistan. According to the Resolution, SEE is a type of environmental examination carried out by specialized expert bodies to ensure compliance of the planned activities with the environmental requirements and determine permissibility of the project implementation.

30. SCEEP is the authorized state body in the field of the SEE. The Center of State Environmental Examination (CSEE) under SCEEP carries out the SEE for projects classified under categories I and II categories to assess their environmental impact (high and medium risk).

31. The CSEE of the regions and the Republic of Karakalpakstan carry out the SEE classified under category III and IV to assess their environmental impact (low risk and local risk).

32. The regulation sets out a procedure of arrangement and carrying out the SEE (Annex 2 to RCM). The environmental assessment stages and their required results are summarized as follows:

- **Stage I:** A Preliminary Environmental Impact Statement (PEIS or PZVOS, see footnote 3) shall be prepared during preparation of a proposed project prior to any fund allocation for development.
- **Stage II:** An Environmental Impact Statement (EIS or ZVOS[14]) shall be carried out on a basis of a conclusion of the environmental expertise issued at the first stage of the assessment. The second stage of the assessment is also submitted to the CSEE, and the conclusion must be received before the start of construction.
- **Stage III:** State Environmental Consequences (SEC) is the final stage of the SEE process and shall be carried out prior to the project start. The report describes in detail the changes to be made to the project design as a result of the CSEE review during the first two stages of the environmental assessment process, comments received during public consultations, environmental standards applicable to the project, and environmental monitoring requirements related to the project, as well as the key opinion.

33. All types of economic activities assessed by SEE are classified as one of four categories:

- Categories I and II are "high and medium risks of environmental impact" (all stages of environmental assessment are required);
- Category III is "low risk of impact" (all stages of environmental assessment are required); and
- Category IV - "local impact" (only the first stage of environmental assessment - PEIS is required).

34. The SEE opinion is valid for three years from the date of its issuance. If a project is not implemented within three years from the date of issuing the opinion, the environmental assessment reports (PEIS or EIS) need to be revised and re-submitted to the CSEE for revision and approval.

35. The opinion of the SEE shall be shared with the relevant regional (city) Control Environmental Inspectorates for their follow up and supervision. Such Inspectorates under the SCEEP supervise the compliance with the requirements and terms specified in the SEE's opinion.

3. Environmental Assessment required for the Subcomponent

36. The national Law "On Environmental Expertise" and Resolution of Cabinet Ministries (RCM) of RUz "On further improvement of the environmental impact assessment mechanism" # 541 dated 2020 requires preparation of the environmental assessment report for all type of activities which may have environmental impact. The subcomponent was classified as a Category III (low risk) – construction of main pipeline, water supply and sewage networks.

[14] ZVOS is Russian translation of Environmental Impact Statement (EIS) – 2st stage of national Environmental Impact Assessment Procedure

37. Three Preliminary Environmental Impact Statements (PEIS, environmental assessment document required for Category III projects or PZVOS[15]) were prepared by MIFT-PIU (with support of a national company) and submitted by the Djizzak Suvtaminot LLC to the SCEEP in Djizzak province in November 2021. Mitigation measures identified in the PEISs are included in this IEE. Environmental Appraisals (Environmental Permission) were obtained in March 2022 as summarized in **Table 1** (Appendix **1.** The Environmental Appraisal of State Environmental Expertise: Preliminary Environmental Impact Statement (PEIS)).

Table 1: Summary of Preliminary Environmental Impact Statement (PEIS) required for urban development subcomponent

Component	Category	Submitted		Environmental Appraisal	
		by	in	by	in
1. Rehabilitation of Water Intakes - Sangzar and Amir Timur	III	Djizzak Suvtaminot	Nov 2021	Djizzak branch of SCEEP	March 2022
2. Rehabilitation of water supply network in Dustlik, Ittifoq and Yoshlik makhallas	III	Djizzak Suvtaminot	Nov 2021	Djizzak branch of SCEEP	March 2022
3. Rehabilitation of water sewage network in Dustlik, Ittifoq and Yoshlik makhallas	III	Djizzak Suvtaminot	Sep 2021	Djizzak branch of SCEEP	March 2022

SCEEP = State Committee on Ecology and Environmental Protection of Uzbekistan

38. The Environmental Appraisals endorsed the Environmental Assessment and provided several conditions needed to be implemented by Project owners before and during the construction phase, as summarized in **Table 2**.

Table 2: Conditions of Environmental Appraisal

Component	Conditions of Environmental Appraisal
1. Rehabilitation of Water Intakes - Sangzar and Amir Timur	• Ensure implementation of requirements on waste management indicated in Resolution of Cabinet Ministries #40 dated from 28 January 2021 “On Improvement of construction wastes management procedure”; • If cutting trees is required, calculate compensation in accordance with national legislation and pay compensation in accordance with RCM # 255 dated from 2018;
2. Rehabilitation of water supply network in Dustlik, Ittifoq and Yoshlik makhallas	• Ensure implementation of requirements on waste management indicated in Resolution of Cabinet Ministries #40 dated from 28 January 2021 “On Improvement of construction wastes management procedure”; • If cutting trees is required, calculate compensation in accordance with national legislation and pay compensation in accordance with RCM # 255 dated from 2018;
3. Rehabilitation of Water Intakes - Sangzar and Amir Timur	• Ensure implementation of requirements on waste management indicated in Resolution of Cabinet Ministries #40 dated from 28 January 2021 “On Improvement of construction wastes management procedure”; • If cutting trees is required, calculate compensation in accordance with national legislation and pay compensation in accordance with RCM # 255 dated from 2018;

[15] PZVOS is Russian translation of Preliminarily Environmental Impact Statement (PEIS) – 1st stage of national Environmental Impact Assessment Procedure

39. The environmental appraisal will be valid for three years. If construction activity does not start until November 2024, the revised version of PEISs will be submitted for approval to the Djizzak branch of the SCEEP.

40. Before the subcomponent facilities come into operation, the third stage of the national environmental appraisal process – development of the Statement on Environmental Consequences (SEC) will be completed. The SEC will be prepared by Djizzak Suvtaminot LLC and will be submitted to the SCEEP for approval.

41. **Table 3** presents permissions from the national agencies needed to be received prior to commencement of civil works and prior to the project operation:

Table 3: List of required approvals and permissions

#	Name of the document	Time of receiving permission	Agency issuing permission	Responsible entity
1	Permission/license for using existing borrow pits or opening new ones (if any)	Prior to commencement of the construction works	Provincial Land Cadastre Department. SCEEP	Contractor
2	Permission for cutting trees (in case of necessity of cutting trees which are not belonged to population and not part of LARP)	Same as above	Provincial SCEEP	Contractor
3	Permission on water use during construction phase	Prior to starting use of water from wells	Djizzak Suvtaminot LLC	Contractor
4	SEC	Prior to commissioning of the pipeline and networks	Provincial SCEEP	Djizzak Suvtaminot LLC
5	Permission on water use for operation phase	Prior to starting use of water from wells	Provincial SCEEP	Djizzak Suvtaminot LLC

Djizzak Suvtaminot LLC = Company in charge for water supply and sanitation in Djizzak city, LARP = Land Acquisition and Resettlement Plan, SCEEP = the State Committee on Ecology and Environmental Protection, SEC = Statement on Environmental Consequences

4. Environmental Regulatory Framework

42. The major emphasis of the environmental policy of Uzbekistan is aimed at environmental safety being regarded as the strategic component of national security, and the most important aspect of protecting the vital interests of the state, society, and identity. The environmental safety policy of the country is based on the Constitution, national laws, the National Security Concept of Uzbekistan, principles of the Rio de Janeiro Declaration on Environment and Development and Johannesburg Declaration on Health and Sustainable Development with due regard to national commitments under various international conventions and agreements, as well as legislative experience of the developed countries.

43. Since the country gained its independence, RUz has developed over 100 laws and regulations, and inherited old Soviet legislation and policies. One of the national objectives is to transit to sustainable social and economic development. For this purpose, RUz has revised and improved the national environmental legislation, enacted new environmental laws and regulations, developed programs and action plans to address environmental issues and promote sustainable use of natural resources.

44. The legal framework in the field of nature protection and management established in Uzbekistan, provides to the citizens the rights and duties specified in the Constitution. Specific articles of the Constitution around environmental issues include:

- Article 50. All citizens shall protect the environment;
- Article 51. All citizens shall be obliged to pay taxes and local fees established by law;

- Article 54. Any property shall not inflict harm to the environment;
- Article 55. Land, subsoil, flora, fauna, and other natural resources are protected by the state and considered as resources of national wealth subject to sustainable use.

45. Uzbekistan has updated several sub-laws and statutes for environmental management and is a party to several international and regional environmental agreements and conventions. The key national environmental law is the Law on Nature Protection (1992). A brief overview of this law and the other sub-laws related to environment is presented below.

46. The law **"On Nature Protection"** (1992) states legal, economic, and organizational foundations for conservation of environment and rational use of natural resources. Its purpose is to ensure balanced relations between humans and nature to protect the environmental system and to guarantee the rights of population to live in safe environment. Article 25 of the law states that the SEE is a mandatory measure for environmental protection, preceded to decision-making process. In addition, article 25 says that the implementation of a project without Positive Conclusions on the SEE is prohibited.

47. The Law of the RUz **"On Ambient Air Protection"** (1996, amended on 10 October 2006). It specifies regulations on air protection and its objectives. It also includes standards, quality and negative impact, norms, and requirements on fuels and lubricants, production and operation of vehicles and other machinery and equipment, ozone layer protection requirements, obligations of enterprises, institutions and organizations toward air protection, and compensations for damages from air pollutions.

48. Law of the RUz **"On Water and Water Use"** (1993). It regulates water relations, efficient water use by the population and economy. The law regulates protection of water from pollution and depletion, prevention, and elimination of harmful impact on water, improvement of water bodies and protection of the rights of enterprises and institutions, organizations and dehkan farms and individuals in the field of water relations.

49. **Land Code of the RUz** (1998). It aims to regulate land relations to ensure that present and future generations have evidence -based, sustainable use and conservation of land and improvement of soil fertility, conservation and improvement of the environment and conditions for equitable development of all forms of management, protection of individuals and legal entities' rights for land, as well as strengthening the rule of law in this area.

50. **Law on Wastes** (2002, amended in 2011). It addresses waste management, exclusive of emissions and air and water pollution, and confers authority to the SCEEP concerning inspections, coordination, environmental expertise and establishes certain parameters regarding locations for waste disposal. Enterprises are responsible for their waste, but, if they recycle, they may be provided with assistance from the state budget, the National Fund for Nature Protection, or voluntary payments. The key objective of this law is to prevent negative effects of solid wastes on people's lives and health, as well as on the environment, reduce waste generation, and encourage rational use of waste reduction methods in household activities.

51. Other laws and standards applicable for the current project are:

- Decree of the President of the RUz - "On measures to improve water resources management in the RUz to increase the level of population security with portable water and to improve its quality" (# 5883 as of 26 November 2019);
- KMK 2.04.02-97 - Water Supply. External networks and utilities;
- Decree of the President of the RUz – "On measures for further improvement of the portable water supply and sewerage system, as well as increasing the efficiency of investment projects in this sphere" (# 6074 as of 25 September 2020);
- Decree of the Cabinet of Ministers of the RUz - "On additional measures to improve environmental activities in the municipal service system" (# 11 as of 3 February 2010, amended on 26 March 2019);

- Decree of the Cabinet of Ministers of the RUz - “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 RUz” (# 981 as of 11 December 2019);
- Decree of Cabinet Ministries of RUz - “On approval of some administrative regulations for rendering public services in the sphere of nature use” (# 255 as of 31 March 2018);
- Law on Protection and Use of Archeological Heritage (2009);
- Decree of the Cabinet Ministries of RUz - “On approval of the regulations on the order of water use and water consumption in the RUz” (# 82 as of 19 March 2013, amended on 10 October 2018);
- RH 84.3.6:2004 - Instructions for the regulation of discharges of pollutants into water bodies and onto the terrain, considering technically achievable treatment indicators;
- O’z DSt 951:2011 - Sources of centralized drinking water supply. Hygienic, technical requirements and selection rules;
- O’z DSt 950:2011 - Drinking water. Hygienic requirements and quality control;
- SanR&N No 0318-15 - Hygienic and anti-epidemic requirements for the protection of water in reservoirs on the territory of the RUz;
- SanR&N 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;
- SanR&N 0293-11 - Hygienic standards list of maximum permissible concentrations (MPC) of pollutants in the atmospheric air of populated areas on the territory of the RUz;
- KMK 3.01.02-00 - Construction safety;
- SanR&N No.0267-09 - Sanitary norms and rules for ensuring permissible noise in the premises of residential, public buildings and on the territory of residential buildings;
- O’z DSt 1057:2004 - Vehicles. Safety requirements for technical conditions
- O’z DSt 1058:2004 - Vehicles. Technical inspection. Method of control;
- Decree of Cabinet Ministries of RUz – “On the regulation of the use of biological resources and on the procedure of passing permission procedures in the sphere of nature use (# 290 as of 20 October 2014);
- SanR&N No 0172-06 - Hygienic requirements for the protection of surface waters in the territory of the RUz;
- Decree of the Cabinet of Ministers of Uzbekistan – “On Measures to Further Improve Economic Mechanisms for Environmental Protection” (# 820 as of 11 October 2018);
- Decree of the Cabinet of Ministries of the RUz – “On measures for ordering the use of underground water, enhancing their protection from pollution, and also preventing reduction” (#179 as of 8 April 1992);
- SanR&N No 0212-06 - Hygienic assessment of the degree of soil pollution of different types of land use under specific conditions of Uzbekistan;
- SanR&N No 0183-05 - Hygienic requirements for the quality of the soil in settlements areas in specific natural and climatic conditions of Uzbekistan;
- BR&N No 2.01.08-96 – Noise protection;
- BR&N No 2.04.01-98 - Internal water supply and sewerage of buildings;
- BR&N No 2.04.02-97 - Water supply rules, outdoor networks, and structures;

- BR&N No 2.04.03-97 - Sewerage. Outdoor networks and facilities.

B. Environment Quality Standards

1. Noise and Vibration Standards

52. National and international noise standards are presented in **Table 4**. National norms comply with the international ones for both - day time (55 dB) and nighttime (45 dB) in residential area and they are more stringent for offices by 10 dB.

Table 4: Maximum allowable noise standards (dB): comparison of national and international maximum allowable noise standards (dB)

Receiver	National[16]		General EHS Guidelines[17]	
	Daytime (7am – 11pm)	Nighttime (11pm – 7am)	Daytime (7am – 10pm)	Nighttime (10pm – 7am)
Residential	55	45	55	45
Offices, commercial	60	-	70	70

53. There is some difference in defining a daytime and nighttime between General EHS Guidelines and the national standards. General EHS Guidelines indicate as nighttime period is from 10 pm to 7 am, while the national standards define this period between 11 pm and 7 am. On this aspect, more stringent standards (General EHS Guidelines) will be applied for this project.

54. The national standards for vibration level in residential houses are provided in Sanitarian Norms and Rules (SanN&R) № 0331-16 “Residential house design in climatic conditions of Uzbekistan”. For residential houses the standard is 67 dB for nighttime and 72 dB for daytime with a frequency of 37 and 61 Hz. For non-continuous vibration, the standards should be decreased by 10 dB (**Table 5**). However, the standard does not provide any coefficient/allowance for non-frequent events such as passing trains. For the construction phase the vibration limit will be 72 dB.

Table 5: National vibration standards

	Permanent vibration, dB
Daytime	72
Nighttime	67

55. The manual cites criteria developed by the United States Federal Transit Administration (FTA), which indicates vibration impact level on residences and building where people normally sleep (**Table 6**).

Table 6: Federal Transit Administration (FTA) Vibration Impact Criteria

Land Use Category	Vibration Impact Level for Frequent Events (VdB)	Vibration Impact Level Infrequent Events (VdB)
Category I: Buildings where low ambient vibration is essential for interior operations	65	65
Category II: Residences and buildings where people normally sleep	72	80
Category III: Institutional land uses with primarily daytime use	75	83

[16] Sanitarian Norms and Rules (SanPiN) # 0331 (2016) Admissible noise level into the living area, both inside and outside the buildings, Table 10.2.4.2

[17] *World Bank Group, Environmental, Health, and Safety Guidelines*, April 30, 2007, Washington, USA. https://www.ifc.org/wps/wcm/connect/29f5137d-6e17-4660-b1f9-02bf561935e5/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES&CVID=nPtguVM in English. https://www.ifc.org/wps/wcm/connect/be37221a-fc47-4379-b539-eca3fe72c3e6/General%2BEHS%2B-%2BRussian%2B-%2BFinal_.pdf?MOD=AJPERES&CVID=nPtgFKk&ContentCache=NONE&CACHE=NONE in Russian.

Note: “Frequent events” is defined as more than 70 events per day. “Infrequent events” is defined as fewer than 70 events per day.

56. For non-residential areas, standards for buildings integrity were accepted in accordance with **Table 7.** Maximum continuous vibration levels for preventing damage (mm/s).

57. **Table 7** presents maximum continuous vibration level for preventing damages for different type of buildings, as set by the American Association of State Highway and Transportation Officials (AASHTO) and Swiss Association of Standardization (SAS). This data could be used as thresholds for both phases – construction and operation for structural integrity of buildings/houses.

Table 7: Maximum continuous vibration levels for preventing damage (mm/s)

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

58. As international standards for vibration were used, the standards provided in general guidance on human response to building vibrations is given in: (i) AS 2670.2–1990 Evaluation of human exposure to whole-body vibration: continuous and shock-induced vibration in buildings” (1 to 80 Hz);(ii) ISO 2631–2:2003 Mechanical vibration and shock: evaluation of human exposure to whole body vibration, Part 2: Vibration in buildings (1 Hz to 80 Hz); (iii) BS 6472 –1:2008 Guide to evaluate human exposure to vibration in buildings. Vibration sources other than blasting. Based on these guidelines, the ground vibration limits are presented in **Table 8**.

Table 8. Ground vibration limits for human comfort[18]

Category	Period	Peak component particle velocity (mm/s)	Vibration, dB
Residential	Nighttime	0.2 mm/s	72
	Daytime	0.3 mm/s	76
Offices	When occupied	0.6 mm/s	82
Occupied non-sensitive sites, such as factories and commercial premises	When occupied	2.5 mm/s	94

mm/s = millimeters per second

a sensitive site includes houses and individual residential buildings, theatres, schools, and other similar buildings occupied by people.

59. Therefore, as a result of comparison of both national and international standards for vibration, it was accepted that national standards for vibration in residential areas are more stringent, and therefore will be applied for the project, i.e. 72 dB during daytime and 65 dB during nighttime.

[18] https://industry.gov.au/resource/Programs/LPSD/Airborne-contaminants-noise-and-vibration/Vibration/Pages/Ground-vibration-limits.aspx

2. Air Quality Standards

60. The following regulatory documents defines standards for the main pollutants in air in the living area: SanR&N 0293-11 Hygienic standards. The list of maximum permissible concentrations of pollutants in the ambient air of settlements in the territory of the RUz" (**Table 9**).

Table 9: Summary of the relevant Ambient Air Quality Standards for Protection of Human Health (mg/m^3)

Air quality parameter	Maximum allowed during 30 min	Maximum allowed average daily	Maximum allowed average monthly	Maximum allowed average yearly
NO_2	0.085	0.06	0.15	0.04
NO	0.6	0.25	0.12	0.06
SO_2	0.5	0.2	0.1	0.05
CO	5	4	3.5	3
Dust (PM_{10})	0.15-0.5	0.1-0.35	0.08-0.2	0.05-0.15

61. The WHO standards[19] for air quality are presented in **Table 10**, below.

Table 10: WHO air quality standards

Air quality parameter	Period	Norm (mg/m^3)
SO_2	24 hours 10 minutes	20 500
NO_2	1 year 1 hour	40 200
PM_{10}	1 hour 24 hours	50 20
$PM_{2.5}$	1 hour 24 hours	25 10

62. The air quality standards recommended for assessment of ambient air quality are presented in **Table 11**.

Table 11: Ambient Air Quality Standards

Pollutant	Average Period	Norm in mg/m^3	Norm mg/m^3	Source of standards
SO_2	10 min	500	0.5	EHS Guidelines
	30 min	500	0.5	Uzbekistan
	24 hours	20	0.02	EHS Guidelines/
	1 month	500	0.5	Uzbekistan
	1 year	50	0.05	Uzbekistan
NO_2	10 min	200	0.2	EHS Guidelines/ Uzbekistan
	30 min	85	0.085	Uzbekistan
	24 hours	60	0.06	Uzbekistan
	1 month	50	0.05	Uzbekistan
	1 year	40	0.04	EHS Guidelines/ Uzbekistan
NO_x	30 min	600	0.6	Uzbekistan
	24 hours	250	0.25	Uzbekistan
	1 month	120	0.12	Uzbekistan
	1 year	600	0.6	Uzbekistan
CO	30 min	5000	5.0	Uzbekistan
	24 hours	4000	4.0	Uzbekistan

[19] WHO Air Quality Guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide, Global Update 2005, Summary Risk Assessment

Pollutant	Average Period	Norm in mg/m^3	Norm mg/m^3	Source of standards
	1 month	3500	3.5	Uzbekistan
	1 year	3000	3.0	Uzbekistan
PM_{10}	1 year	20	0.02	EHS Guidelines
	24 hours	50	0.05	EHS Guidelines
PM_{25}	1 year	10	0.1	EHS Guidelines
	24 hours	25	0.025	EHS Guidelines

3. Water quality standards

63. There are different standards for various type of water bodies in Uzbekistan. Depending on the purpose of use, water bodies could be categorized as for domestic use (could be used as a source for potable water after treatment), fishery, municipal use, and irrigation purposes. **Table 12** and **Table 13** present the national general effluent standards into the water bodies classified by type of use.

Table 12: General water standards[20]

Indicators	Purpose of water use			
	Domestic use	Recreation and service	Fishery needs: Highest and first category	Fishery needs: Second category
Suspended solids	Depending on natural conditions, the content of suspended solids in wastewater discharge shall not exceed: 0.25 mg/dm^3	0.75 mg/dm^3	0.25 mg/dm^3	0.75 mg/dm^3
	For reservoirs and watercourses containing at low water above 30 mg/dm^3 of suspended solids, there may be an increase to 5%. Discharge of suspensions with fallout rate of more than 0.4 mm/s for watercourses and more than 0.2 mm/s in water reservoirs are prohibited			
Floating matter	There shall not be a film of oil products and concentrations of other contaminants on the water surface			
Color	Shall not be detected in the column of height: 20 cm	10 cm	There shall be no adulterants	
Smell and test	Intensity of more than 1 point is not permitted		Water must not give extraneous odors and flavors to fish meat	
Temperature	Temperature of water at the discharge point shall not exceed 3ºC as compared with average monthly temperature of the hottest month		Temperature of water at the discharge point shall not exceed 5ºC as compared with average monthly temperature of the hottest month. Increasing of temperature more than 28ºC in summer and till 8ºC in winter is not allowed	
Hydrogen exponent (pH)	Shall not be beyond 6.5...8.5 pH		Shall not be beyond 6.5...8.5 pH	
Water salinity	Dry residue shall not exceed 1000 mg/dm^3, including chlorides – 350 mg/dm^3 and sulphate - 500 mg/dm^3		Rated according to water bodies intoxications	
Dissolved oxygen			In winter shall be no less than	

[20] SanR&N No 0172-04 “Hygiene requirements for protection of surface waters in RUz” and Attachment to Construction Norms and Rules (CNR) 1.03.01-96 “Guidelines on content, order, approval and endoresement of design estimate for enterpises, building construction”.

Indicators	Purpose of water use			
	Domestic use	Recreation and service	Fishery needs	
			Highest and first category	Second category
	No less than 4 mg/dm^3 in any period of the year in a sample taken by 12 a.m. on the same day		6 mg/dm^3	
			No less than 6 mg/dm^3 in any period of the year in a sample taken by 12 a.m. on the same day	
BOD	At 20ºC shall not exceed 3.0 mg/dm^3	6.0 mg/dm^3	At 20ºC shall not exceed 3.0 mg/dm^3 if in winter the dissolved oxygen content in water of the first* category fishing water bodies fells to 6.0 mg/dm^3, and in the second** – to 4 mg/dm^3, then discharge is only permitted to wastewater that does not change the BOD	
COD	Shall not exceed			
	15.0 mg/dm^3	30.0 mg/dm^3	-	-
Causative agent (of a disease)	Not allowed			
Chemicals (pollutants)**	Shall not be contained in concentrations exceeding the MAC			

*- The first category includes water bodies, where valuable fish species highly sensitive to oxygen are kept and reproduced)

** - The second group includes water bodies used for other aquatic economy needs.

64. Maximum allowed concentrations of most spread chemical pollutants are presented in **Table 13**. As shown in the Table, the national standards for irrigation water fully comply with the international standards. Therefore, the national standards for fishery are taken as a basis for this IEE.

Table 13: Maximum permissible concentration of pollutants in water bodies by water use category (mg/m^3)

Pollutants	Water use category (Handbook of environmentalist, Tashkent 2010)					
	Fishery	Municipal	Potable water		Irrigation water for direct use without blending	
			Nat	WHO[21]	Nat	FAO[22]
COD	15	30	30	-	40	-
BOD_{20}, mg_{O2}/L	3	3-6	3-6	-	10	-
pH	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5
Water salinity	1,000	1,000	1,000-1,500	1,000	1,000	0-2,000
Including: sulphates	100	500	400-500	-	-	1,900
Chlorides	300	350	250-350	-	-	300
Ammonium nitrogen (ammonium salt) (NH_4^+)	0.5	2	0.5	-	1.5	0-5
Nitrogen	9.1	25	45	-	25	-
Nitrogen nitrite	0.02	0.5	3	-	0.5	0-10
Nitrite	0.08	3.3	3	3	-	-
Nitrate	40	45	45	50	-	-
Phosphate (PO_4^{3-})	0.3	1	3.5	-	1	0-2

[21] WHO, Guidelines for drinking water quality, Fourth edition, 2017

[22] FAO Guidelines for interpretations of water quality for irrigation, http://www.fao.org/3/t0234e/t0234e01.htm

Pollutants	Water use category (Handbook of environmentalist, Tashkent 2010)					
	Fishery	Municipal	Potable water		Irrigation water for direct use without blending	
			Nat	WHO[21]	Nat	FAO[22]
Ether soluble	0.05	0.8	0.8	-	0.8	-
Oil products	0.05	0.3	0.1	-	0.3	-
Sodium alkyl sulfates (SAS)	0.1	0.5	0.5	-	0.5	-
Phenol	0.001	0.001	0.001-0.1	-	0.001	-
Fluorine (F)	0.05	1.5	0.7	1.5	1	-
Arsenic (As)	0.05	0.05	0.05	0.01	0.1	-
Iron (Fe)	0.05	0.5	0.3-3	-	5	-
Chromium (Cr^{6+})	0,001	0.1	0.05	0.05	0.1	-
Copper (Cu)	0,001	1	1	2	1	-
Zinc (Zn)	0.01	1	3	-	5	-
Cyanides	0.05	0.1	0	0	-	-
Lead (Pb)	0.03	0.1	0.03	0.01	0.2	-
Nickel (Ni)	0.01	0.1	0.1	0.07	-	-
Cadmium (Cd)	0,005	0.01	-	0,003	-	-
Cobalt (Co)	0.1	1	-	-	-	-
Molybdenum (Mo)	0.0012	0.5	0.25	-	-	-
Strontium (Sr^{2+})		2	7	-	-	-
Selenium (Se)	0.001		0.01	0.04	-	-
Mercury (Hg)		0.005	0.0005	0.006	-	-
Boron (B)		0.53		2.4	0.53	0-7-3

65. **Buffer zones for groundwater intakes and single wells.** In accordance with KMK 2.04.02-97 “Water supply. External networks and facilities for ground water sources used for drinking purposes three zones of buffer zones are defined. National requirements for buffer zone for underground water intakes is presented in Appendix **10.** National requirements for buffer zone for underground water intakes.

4. Soil Quality Standards

66. The soil quality standards are defined in the SanR&N # 0191-05 dated from 2005 “Sanitary maximum permitted concentrations (MPC) and tentatively acceptable concentration of exogenous pollutants in the soil”. The national standards have been compared with the international ones (**Table 14**).

Table 14: Maximum Allowable Concentration (MAC) of pollutants in the soil

Parameter	Unit	Uzbek Standard (1)	Dutch Intervention Values (2)	EHS Guidelines[23]
Antimony	mg/kg	4.5	22	There are no detailed numerical requirements to soil quality established by EHS Guidelines
Arsenic	mg/kg	2.0	76	
Cadmium	mg/kg		13	
Chromium	mg/kg	6.0		
Chromium VI	mg/kg		78	
Cobalt	mg/kg	5.0	190	
Copper	mg/kg	3.0	190	
Mercury (organic)	mg/kg	2.1	4	
Lead	mg/kg	32.0	530	
Molybdenum	mg/kg	10.0	190	
Nickel	mg/kg	4.0	100	
Selenium	mg/kg		100	

[23] Footnote 17.

Parameter	Unit	Uzbek Standard (1)	Dutch Intervention Values (2)	EHS Guidelines[23]
Zinc	mg/kg	23.0	720	
Cyanides	mg/kg		20 (free) 50 (complex)	
Benzene	mg/kg	0.3	1.1	
Ethylbenzene	mg/kg		110	
Toluene	mg/kg	0.3	32	
Xylenes (sum)	mg/kg		17	
Styrene (vinylbenzene)	mg/kg	0.1	86	
Phenol	mg/kg		14	
Vanadium	mg/kg	150.0	250	
Nitrates	mg/kg	130.0	-	
Sulphate (H_2SO_4)	mg/kg	160.0	-	
Total Petroleum Hydrocarbons (Mineral Oil)	mg/kg		5,000	
PAHs (total)	mg/kg		40	
Ammonia Nitrogen	mg/kg		1.5	

Notes:
(1) General EHS Guidelines (footnote 17), Wastewater and Ambient Water Quality
(2) SanR&N #0191-05. Sanitary Permissible Concentrations (MPC) and Indicative Acceptable Concentrations (IAC) of Exogenous Harmful Substances in the soil (November 5, 2005)

C. ADB Safeguard Policy Statement (SPS, 2009)

67. The gap analysis between ADB environmental safeguard requirements and national legislation is provided in **Table 15**. The table also presents information on how the identified gap has been harmonized.

Table 15: Gap analysis between ADB safeguard requirements and Uzbek national environmental legislation

Aspect	Asian Development Bank	National Regulations	Harmonized Framework
Environmental Policy and Regulations	ADB SPS sets out the policy objectives, scope and triggers, and principles for three key safeguard areas: Environmental safeguards, Involuntary resettlement safeguards, and Indigenous people safeguards	Environmental assessment and permitting procedure in Uzbekistan are set out in the following laws and regulations: Law on Nature Protection (1992); Law on Environmental Expertise (2000), and Resolution of Cabinet Ministries (RCM) "On the further improvement of the environmental impact assessment mechanism" No. 541 (2020)	
Screening	ADB carries out project screening and categorization at the earliest stage of project preparation when sufficient information is available for this purpose using rapid environmental assessment (REA) checklist. Categories A, B, C, FI	A project category is classified in accordance with Appendix 1 to RCM No. 541. The Appendix provides a list of activities split for 4 categories.	The project is classified as Category B (ADB classification) and Category III (low risk) (national legislation).
Scoping	Avoid, minimize, mitigate and/or offset any adverse impacts and enhance positive impacts through environmental planning and management	The environmental assessment should evaluate: (i) compliance of a proposed project with the environmental requirements, (ii) level of risk related to project implementation on people's health and environment, and (iii) efficiency of developed measures to mitigate identified impacts.	Conduct a process of Environmental Impact Assessment that will consider potential environmental (including labor, health, and safety) risks and project impacts.
	Executing Agency considers potential impacts (direct, indirect and cumulative) and risks on physical, biological, resettlement, socio-economic (including health and safety), and physical cultural resources	Environmental assessment considers the project's potential impacts on physical, biological, socio-economic, and cultural resources, including cumulative impacts.	The Environmental Impact Assessment will consider natural environment (air, water, and land); human health and safety; social aspects (involuntary resettlement, indigenous people, and physical cultural resources).
Alternatives	Examination of financially and technically feasible alternatives to the project location, design, technology and components, their potential environmental and social impacts Consider "without project" scenario.	For the EIS (national Environmental Impact Assessment), consideration of alternatives is required. Alternatives that may be assessed include alternatives of processing, technical design, location of a facility, architectural and planning options. Another mandatory requirement is consideration of the **zero option**.	Assessment of alternatives will include alignment of the pipeline, type of water meters and "without project" project scenario.
Environmental Assessment Report	Guidelines and Table of Contents are provided for environmental assessment report in ADB SPS: (i) Executive Summary, (ii) Policy, Legal	The RCM No.541 defines activities to be undertaken under EIS preparation. Description of undertaken activities should be included into the	The IEE and EMP reports will follow the table of contents proposed in ADB SPS. PEIS will

Aspect	Asian Development Bank	National Regulations	Harmonized Framework
	and Administrative Framework, (iii) Description of the project, (iv) Description of the Environment, (v) Anticipated Environmental Impacts and Mitigation Measures, (vi) Analysis if Alternatives, (vii) Information disclosure, Consultations, and Participation, (viii) Grievance Redress Mechanism, (ix) Environmental Management Plan, and (x) Conclusion and Recommendation. EMP will include proposed mitigation measures, monitoring and reporting requirements, institutional arrangements, schedules, cost estimates and performance indicators.	EIS report. The RCM requires the following: (i) assessment of the existing environmental and socio- economic conditions, (ii) project description, (iii) anticipating discharges, emissions, wastes, their impact on environment and disposal methods, (iv) collection, storage and waste disposal (v) review of alternatives, (vi) institutional, technical and technological mitigation measures, (vii) emergency risk assessment, probability of occurrence and emergency response measures, (vii) forecast of changes in the environment after project operation. The complexity of the report depends on the project category.	be prepared separately following the national regulation, but in line with the IEE.
Public Consultations	Carry out meaningful consultations with affected people and facilitate their informed participation Ensuring women's participation in consultation. Involving stakeholders, project- affected people and concerned NGOs early in the project preparation and ensure that their views and concerns are made known and understood by decision makers and considered. The consultation process and its results are to be documented and reflected in the environmental assessment report.	Public meetings are mandatory only for the projects under Categories 1 and 2.	Consultations will be carried out with stakeholders, affected people, NGOs in accordance with COVID-19 restrictions. Questions and concerns raised during public consultations held during FS stage have been considered. All questions and concerns raised during public consultation will be included in IEE. Also, signed list of participants, photos from meetings will be attached to this IEE.
Public Disclosure	IEE will be disclosed on the websites of ADB. The borrower needs to provide relevant environmental information in a timely manner, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. For illiterate people, other suitable communication methods will be used.	National environmental legislation does not require disclosure of PEIS/EIS.	The summary of the final IEE, EMP and GRM will be translated into Uzbek language, a full report will be translated into Russian and both documents will be posted on MIFT-PIU website (footnote 5 and Table 35). The final IEE report translated into Russian and Uzbek will be sent to the Djizzak branch of the SCEEP, and administrative units in the project area.

Aspect	Asian Development Bank	National Regulations	Harmonized Framework
Monitoring and Reporting	The borrow/client must monitor and measure the progress of implementation of the EMP and prepare periodic monitoring reports that describe progress with implementation of the EMP and compliance issues and corrective actions if any	Monitoring of mitigation measures developed under IEE is a responsibility of design consultant developed Feasibility Study (design supervision). External monitoring could be conducted by representatives of the SCEEP. There are no requirements to submit report during construction phase. The report on waste generation will have to be submitted by the Implementing Agency to SCEEP	Environmental Monitoring Plan (EMoP) will be developed under this IEE to monitor implementation of EMP requirements. The IEE also includes requirements on preparation of semi-annual Environmental Monitoring Reports and their submission to ADB for further disclosure on ADB and PIU-MIFT websites.
Grievance Redress Mechanism	The GRM must be established to receive and facilitate resolution of affected peoples' concerns and grievances about the project/s environmental performance.	A grievance redress procedure in Uzbekistan is also regulated by the national legislation, by the law "On Citizens' Applications" and the law "On procedure of submission of appeals from individuals and legal entities" (#378, 03 December 2014), and others	The GRM for this subcomponent will be developed in accordance with ADB and national requirements.

D. International Legislation

68. ADB SPS requires the borrower to, during the design, construction, and operation of the project, apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in internationally recognized standards such as the EHS Guidelines (footnote 4). These standards contain performance levels and measures that are normally acceptable and applicable to projects. When host country regulations differ from these levels and measures, the borrower will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, the borrower will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in ADB SPS.

1. World Bank Group's Environment, Health and Safety Guidelines

69. ADB SPS indicates that during design, construction and operation, a project initiator shall prevent pollution consistent with international good practice, as reflected in internationally recognized standards such as EHS Guidelines.

70. Following requirements of ADB SPS, MIFT will apply pollution prevention and control technologies and practices consistent with international good practice as reflected in internationally recognized standards such as EHS Guidelines. When Government regulations differ from these levels and measures, MIFT will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, MIFT will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in ADB SPS.

71. In this project, the following EHS Guidelines have been considered:

- *General EHS Guidelines (2007)* (footnote 17)– (i) provides prevention and control measures for each source of pollution applicable to this type of industry Environmental Monitoring Programs; and (ii) provides occupational health and safety sources of threats, prevention and control measures and monitoring;
- *EHS Guidelines for Water and Sanitation (2007)*[24] - includes information relevant to the operation and maintenance of (i) potable water treatment and distribution systems, and (ii) collection of sewage in centralized systems (such as piped sewer collection networks) or decentralized systems (such as septic tanks subsequently serviced by pump trucks) and treatment of collected sewage at centralized facilities;
- *A guidance Note by International Finance Corporation (IFC) and the EBRD*:[25] Workers' accommodation: processes and standards.

2. COVID-19

72. During the project implementation, including both construction and operation, COVID-19 related restrictions will be applied. The national procedures on organizing works during pandemic will have to be followed by all subcomponent participants. The relevant national regulations and procedures are based on WHO Guidance on COVID-19.

73. To stimulate the employees of the Sanitary and Epidemiology Service during the COVID-19 pandemic, the following were approved: Decree of the President of the RUz dated

[24] World Bank Group, Environmental, Health, and Safety Guidelines for Water and Sanitation, 2007, Washington, USA. <https://www.ifc.org/wps/wcm/connect/0d8cb86a-9120-4e37-98f7-cfb1a941f235/Final%2B-%2BWater%2Band%2BSanitation.pdf?MOD=AJPERES&CVID=nPtk0wW> in English. <https://www.ifc.org/wps/wcm/connect/eedfad60-8972-494c-8f95-34ec51291b5f/Water_and_Sanitation%2B-%2BRussian%2B-%2BFinal_.pdf?MOD=AJPERES&CVID=nPtk1Ek&ContentCache=NONE&CACHE=NONE> in Russian.

[25] A guidance note by IFC and the EBRD Workers' Accommodation: Processes and Standards (August 2009)

March 19, No. UP 5969, resolution of the President of the RUz dated 24 April 2020 No. PP 4695.

74. WHO has issued the technical guidance in dealing with COVID-19, including: (i) Risk Communication and Community Engagement (RCCE) Action Plan Guidance Preparedness and Response; (ii) RCCE readiness and response; (iii) COVID-19 risk communication package for healthcare facilities; (iv) Getting your workplace ready for COVID-19; and (v) a guide to preventing and addressing social stigma associated with COVID-19. All these documents are available on the WHO website[26].

75. The Ministry of Health of the RUz, together with WHO, developed the National COVID-19 Guideline.[27]

76. Guidelines on labor protection and safety are reflected in SANR&N No.0372-20 "Temporary sanitary rules and standards for organizing the activities of government bodies and other organizations, as well as business entities in the context of the COVID-19 pandemic".

3. International Agreements

77. The RUz has ratified the following international conventions relevant to this IEE. These are shown in **Table 16** below. Fulfillment of these commitments contributes to environmental sustainability, promotes external funding for stabilization and prevention of degradation of natural resources and cultural heritage, and enhances the country's capacity to use its natural and cultural resources as a basis for poverty reduction and socio-economic development.

Table 16: Participation of Uzbekistan in international conventions relevant to the project

International Conventions and Treaties	Date of Ratification	Date of coming into force for Uzbekistan	Main objectives
United Nations Framework Convention on Climate Change	20 June 1993 (acceptance)	21 March 1994	Stabilizing greenhouse gas concentrations at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system.
Kyoto Protocol	20 August 1999	16 February 2005	Setting internationally binding emission reduction targets.
United Nations Convention Combat Desertification	31 August 1995	29 January 1996	Reversing and preventing desertification and land degradation in affected areas to support poverty reduction and environment sustainability.
United Nations Convention on Biological Diversity	6 May 1995 (accession)	17 October 1995	Conservation of biodiversity, sustainable use of its components, and equitable sharing of the benefits.
Convention on the Conservation of the World Cultural and Natural Habitats	22 December 1995	15 June 1996	Protection of natural and cultural heritage.
Convention on International Trade in Endangered Species of Wild Fauna and Flora	25 April 1997 (accession)	8 October 1997	Ensuring that international trade does not threaten wild animals and plants.

[26] https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance
[27] http://minzdrav.uz/openData/csv/nation_rukovodstvo_COVID-19.pdf

International Conventions and Treaties	Date of Ratification	Date of coming into force for Uzbekistan	Main objectives
Convention on the Conservation of Migratory Species	1 May 1998 (accession)	1 September 1998	Global platform for the conservation and sustainable use of migratory animals and their habitats.
Ramsar Convention on Wetlands of International Importance Especially as Wildlife Habitat	30 August 2001 (accession)	8 February 2002	Conservation and wise use of all wetlands through local and national actions and international cooperation to achieve sustainable development.
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	22 December 1995 (accession)	7 May 1996	Regulation, reduction, and restriction of hazardous wastes transboundary movement.
Stockholm Convention on Persistent Organic Pollutants	22 May 2001	8 May 2019	Convention is a global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of humans and wildlife, and have harmful impacts on human health or on the environment.

III. PROJECT DESCRIPTION

A. Background

1. Existing Water Supply System in Djizzak city

78. The Project will be implemented in Djizzak city of Uzbekistan. The city of Djizzak is the administrative and cultural center of the Djizzak province, located in Central Part of Uzbekistan. The city is connected with other cities of the RUz by the main railway going west to Samarkand and east to Tashkent. Djizzak city is an important junction of highways. The city is located in the center of an oasis irrigated by the waters of the Sangzar River (**Figure 2**). The Djizzak city covers an area of about 100 km^2 (9,640 ha), of which12.9% is occupied by buildings. The city of Djizzak is located in a flat area, where in the north-eastern part the height is 362 m above sea level, and in the south-eastern part it is 373 m. The slope of the city's relief is 0.2% on average[28]. The current population of the city is 178, 849.0 people (2021).

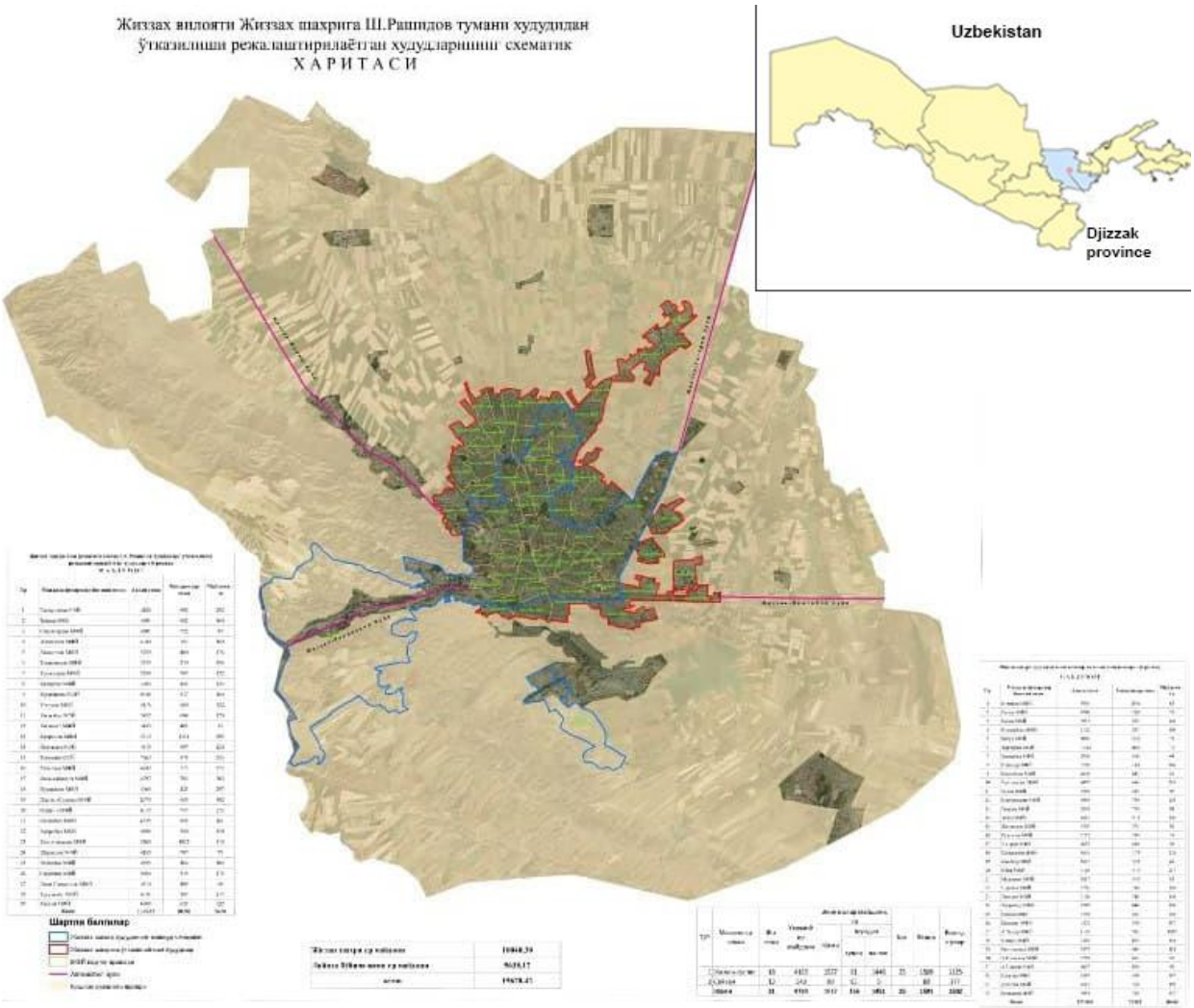


Figure 2: Project location

[28] National Feasibility Study 2021

79. The water supply of the Djizzak city is based on groundwater supplied from seven water intakes located either within or close to the city boundaries. The water intakes cover area with several ground water wells. The names of the main water intakes are:

- Amir Temur – 16 wells;
- Sangzar – 10 wells;
- Uzbekistan – 6 wells;
- Tashlak – 5 wells;
- Urda – 2 wells;
- Building Materials Plant (BMP); and
- Industrial Zone (Promzona) – 11 wells.

80. The main water supply facilities in Djizzak city were built during the period 1960s to 1990s. All water intakes and pumping stations were upgraded with support provided by ADB loan in 2010.

81. From the Sangzar water intake, water is transferred to the city network through an 800 mm diameter pipeline. 600 mm diameter pipeline is connected to the 800 mm Sangzar pipeline transporting water from the Amir Temur water intake. Water from these two intakes is supplied to the transmission pipelines by first stage pumping stations pumping water directly from other the water intakes (Uzbekistan, Tashlak, Urda, BMP and Promzona) after chlorination.

82. According to data provided by Djizzak Suvtaminot LLC, water quality in water intakes complies with national standards for potable water[29]. Results of water quality is presented in **Table 17**.

Table 17: Water quality in water intakes of Djizzak city[30]

Indicator and unit	National standard (OzDSt 950:2000)	Water intakes						
		Tashlak	Industrial Zone	BMP	Urda	Uzbekistan	Sangzar	Amir Temur
Ammonia, mg/l	abs	abs	abs	abs	abs	abs	abs	abs
Hardness, mg- ecq/l	7-10	10.0	10.1-11.0	8.5-9.5	8.8-9.8	9.5-9.9	9.6-10.0	9.0-10.0
Cupper mg/l	1	0	0	0	0	0	0	0
Zinc mg/l	5	0	0	0	0	0	0	0
Nitrates mg/l	45	44	43.6	45	44	46	46	40
Oxidation, mg/l	2	1.04	1.12	1.04	1.04	1.12	1.12	1.12
Fe, mg/l	0.3	0.01	0.02	0.02	0.03	0.03	0,025	0.02
F, mg/l	0.7	0.35	0.33	0.35	0.32	0.34	0.34	0.33
pH	6-8.5	7.44	7.52	7.5	7.6	7.51	7.62	7.64
Sulphate, mg/l	500	180	170	164	172	172	172	170
Dry residual, mg/l	1,000	660	780	550	575	575	570	5S0

OzDSt =name of national standard

83. The location of the intakes and details of the principal distribution systems pipelines are shown below (**Figure 3**).

[29] National standards for Drinking water O'zDSt 950-2011
[30] Data provided LLC Djizzak Suvtaminot for National Feasibility Study, June 2021

Scheme of the drinking water supply system of Jizzakh city
Схема системы питьевого водоснабжения города Джизак Джизакской области

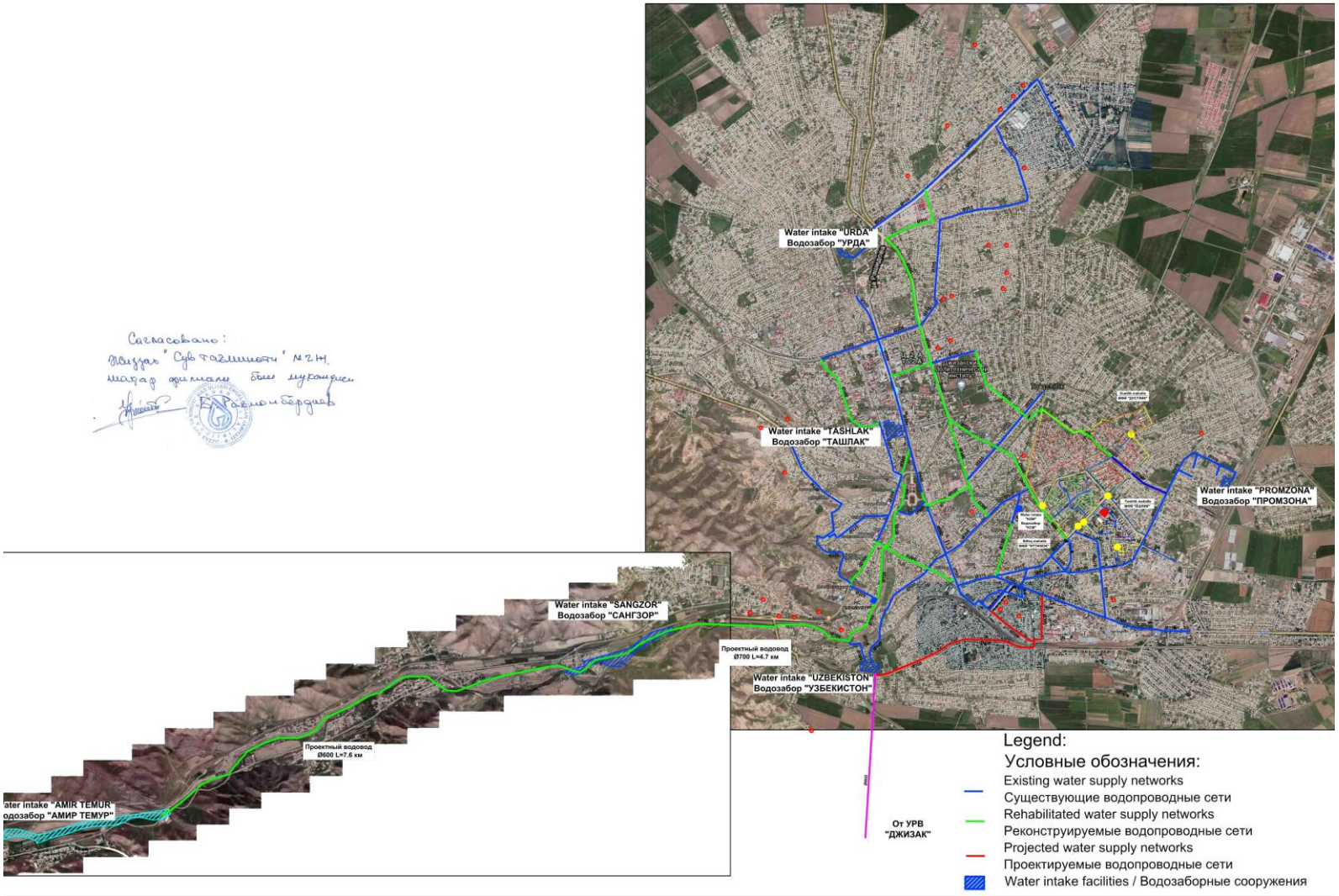


Figure 3: Location of Djizzak City Water Intakes

84. In addition to the water intakes facilities, there are several local water intakes (wells) on the territory of industrial enterprises, educational facilities, and residential areas, all of them located within the city. Some of them work in the summer during high water consumption when water pressure in the network is not sufficient. In total, there are 31 local water intakes on the territory of the city, of which 14 water intakes are not connected to city networks and supply water directly to the settlements. The remaining 17 local water intakes are pumped water into the city network.

85. From Amir Temur water intake until Sangzar water intake the pipeline goes through pre-mountain area and in two points crosses river Sangzar. The view of transmission pipeline supplying water from Amir Temur and Sangzar water intakes is presented in **Figure 4**.

Figure 4: Transmission pipeline supplying water from Amir Temur and Sangzar water intakes (May 2021)

86. At present, the total water supply to the city is 71,800 m^3/day.[31] In general, in the Djizzak city, the coverage of the population with centralized water supply is 98%;[32] per capita water consumption is 300 l/day.[33]

87. There is an extensive trunk network in Djizzak. The total length of the water supply network and water pipelines is 261 km, including 42 km of transmission pipelines. The diameter of pipelines forming the main water supply system is 600, 300, 250, and 150 mm. Most of the existing networks and transmission pipeline were built 40-50 years ago, and for this reason, frequent breaks and water loss occur on the networks. Pipes cannot withstand the necessary pressure, limiting the access of residents of multi-story buildings to a centralized water supply system. Currently, water is supplied to residents on a schedule.

88. Administratively, the Djizzak city is divided in 34 mahallas[34] with a total population of 178,849 people. The layout of the mahallas is shown below.

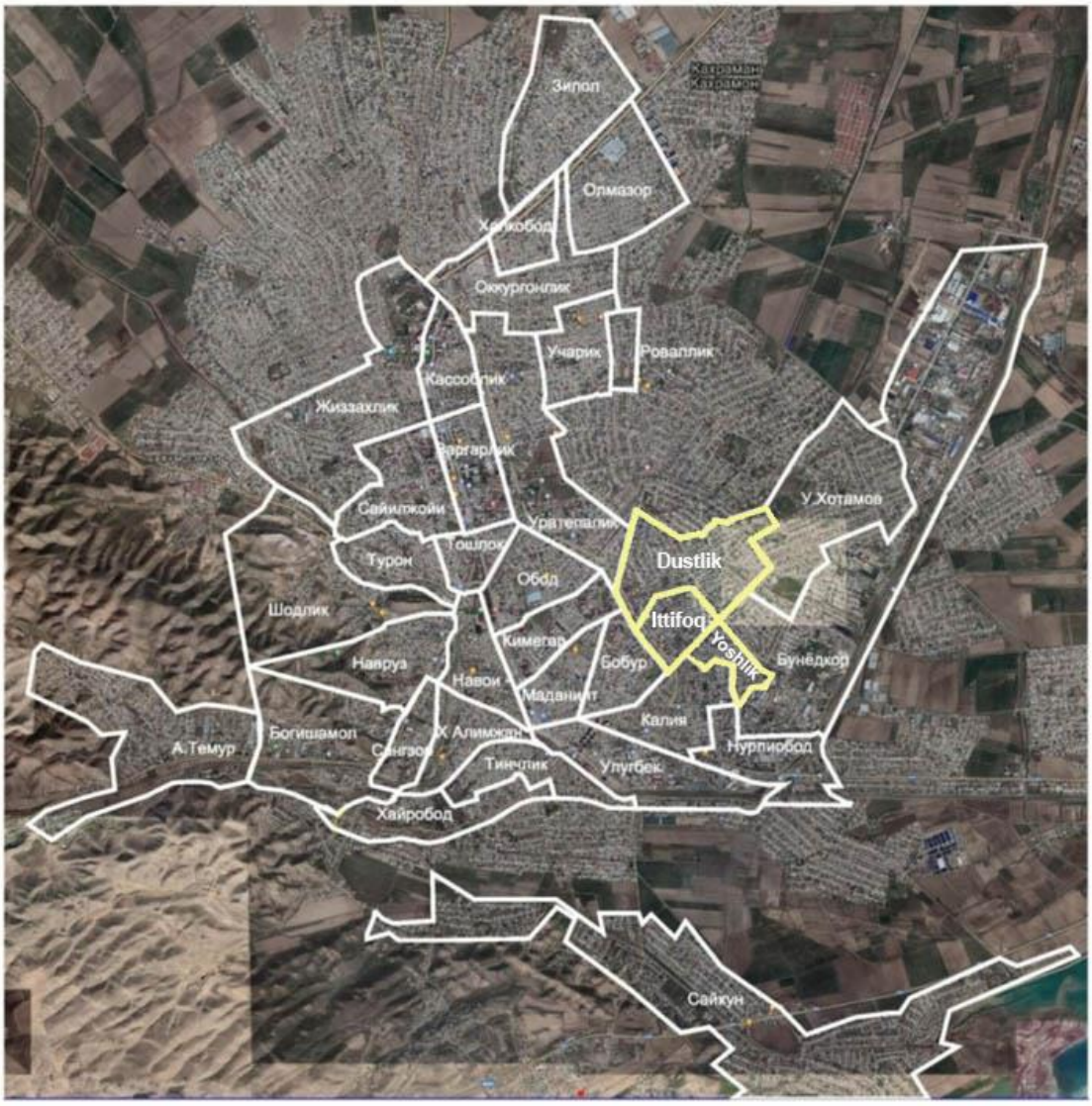


Figure 5: Location of mahallas within the territory of Djizzak city

[31] Data provided LLC Djizzak Suvtaminot
[32] Data provided by LLC Djizzak Suvtaminot
[33] Construction Norms and Rules “Water Supply network” (Uzbekistan, 1997): 300 l/d water consumption includes 15% water losses, 25 % use by big industry (mainly located in Free Economic Zone) and 10% by local industry
[34] 34 mahallas: Amir Temur; A.Navoi; Bobur; Bogishamol; Bunyodkor; Dustlik; Yoshlik; Djizzahlik; Zargarlik; Zilol; Ittifoq; Qaliya; Kassoblik; Kimyogar; Madaniyat; Navruz; Nurliobod; Obod (Kutarma); Oqqugonlik; Olmazor; Ravallik; Sayjoyi; Sayhan; Sangzor; Tinchlik; Toshlok; Turon; Ulugbek; Uratepalik; Ucharik; H. Olimjon; Hayrabod; Halkobod; Shodlik

89. The below table provides data on people connected to the network by mahallas.

Table 18: Coverage of population with water supply network

№	Name of mahalla	Population (2021)		Network connection coverage	%
		People	Households		
1	Amir Temur	6,417	1,095	4,300	67
2	A.Navoi	3,640	1,016	3,640	100
3	Bobur	5,204	1,245	5,204	100
4	Bogishamol	2,307	406	2,230	97
5	Bunyodkor	5,384	1,152	5,384	100
6	Dustlik	4,525	704	4,000	88
7	Yoshlik	4,693	1,052	4,693	100
8	Djizzahlik	3,228	572	3,228	100
9	Zargarlik	11,227	2,257	11,227	100
10	Zilol	10,800	1,738	10,800	100
11	Ittifoq	12,050	2,620	12,050	100
12	Qaliya	9,243	1,157	9,100	98
13	Kassoblik	3,261	697	3,261	100
14	Kimyogar	5,500	1,270	5,500	100
15	Madaniyat	5,982	1,310	5,982	100
16	Navruz	4,017	636	4,017	100
17	Nurliobod	1,480	231	1,450	98
18	Obod (Kutarma)	9,125	1,610	9,125	100
19	Oqqugonlik	5,228	695	5,228	100
20	Olmazor	9,850	2,110	9,850	100
21	Ravallik	2,280	267	2,245	98
22	Sayjoyi	5,910	1,210	5,910	100
23	Sayhan	2,942	520	2,942	100
24	Sangzor	2,693	544	2,693	100
25	Tinchlik	3,006	506	3,006	100
26	Toshlok	3,000	783	3,000	100
27	Turon	3,972	668	3,972	100
28	Ulugbek	3,017	1,541	3,017	100
29	Uratepalik	6,241	966	6,241	100
30	Ucharik	4,580	630	4,500	98
31	H. Olimjon	3,218	678	3,218	100
32	Hayrabod	5,700	606	5,700	100
33	Halkobod	3,822	400	3,822	100
34	Shodlik	3,101	566	3,101	100
	Total	**176,643**	**33,458**	**173,636**	**98**

90. Currently, the Djizzak Suvtaminot LLC reports that there are about 85 gate valves on the network. At least 40% of these valves are out of service. It is often, therefore, impossible to regulate the distribution of water between consumers. The same situation applies to air valves. At least 40% of the valves are broken and need to be replaced. Non-working shut-off valves delay the repair of damaged pipelines, which require shutting off the water supply to many consumers and increase the risk of network contamination during emergency repair operations.[35]

91. There is no existing instrumentation in the Djizzak city water supply system for measuring water production of water consumption. An assessment of the real water balance, both in the system as a whole and in individual supply zones, is not possible. Only a part of the population and legal entities pay for services in accordance with the readings of installed water meters. Data from the Djizzak Suvtaminot LLC shows that of 30,785 domestic connections, 26,785 or 73% are equipped with water meters. These are mechanical water meters whereby the meter readers need to enter the property to read the meters.

[35] Cities Development Initiative for Asia report, 2020

92. There are no bulk water meters to control the flow of water pumped from the intakes into the system. Water losses recorded by the Djizzak Suvtaminot LLC are 28%[36], although this can only be an estimate since accurate information on production is not known. The real level of non-revenue water is suspected to be much higher, at least around 40%. Water supply is carried out according to a fixed schedule due to the poor state of the distribution network. Without real accounting for the volumes of water supplied and sold, it is impossible to assess the real water balance and ensure effective work to reduce losses.

93. **Identified Problems with the Djizzak City Water System.** Despite the large capacity of the water intakes and the relatively high per capita consumption, the quality of service remains at a rather low level. The main cause of public grievance in Djizzak are frequent interruptions in water supply, low pressure in the system, and restriction of water supply zones.

94. The main problems with the water supply system in Djizzak city include the following:

- Water supply for 80% of consumers is provided on a rationed schedule with a total duration of not more than 8 hours per day and in individual settlements, no more than 6 hours per day;
- The high level of unaccounted water consumption, which is suspected to be at least 40% or more;
- The poor condition of many pipelines within the water network of the city;
- The low level of current information support, lack of unified network maps, lack of hydraulic modeling practice when selecting development options and investment planning, the low level of personal computers and software technical services for everyday activities; and
- The lack of a portable water quality monitoring system.

2. Djizzak Sewerage System

95. The sewerage system in Djizzak is currently being improved under the ADB supported project, the Djizzak Sanitation System Development Project.[37] Prior to interventions under this project, the system supplied 12,871 domestic consumers serving a population of approximately 38,500 or 22% of the 2020 population. The network also receives effluent from industrial facilities within the Wastewater Treatment Plant (WWTP) vicinity and from the Uch-Tepa district center located north of Djizzak city. Originally constructed in 1975, and with poor subsequent maintenance, sections of the 131 km-long sewerage networks have now deteriorated well beyond their useful life, resulting in extensive and frequent network malfunctions. Due to the condition of old WWTP, it was decided to construct a new WWTP under the proposed ADB supported project discussed below.

[36] Cities Development Initiative for Asia report, 2020
[37] 46135-002: Djizzak Sanitation System Development Project | Asian Development Bank (adb.org)

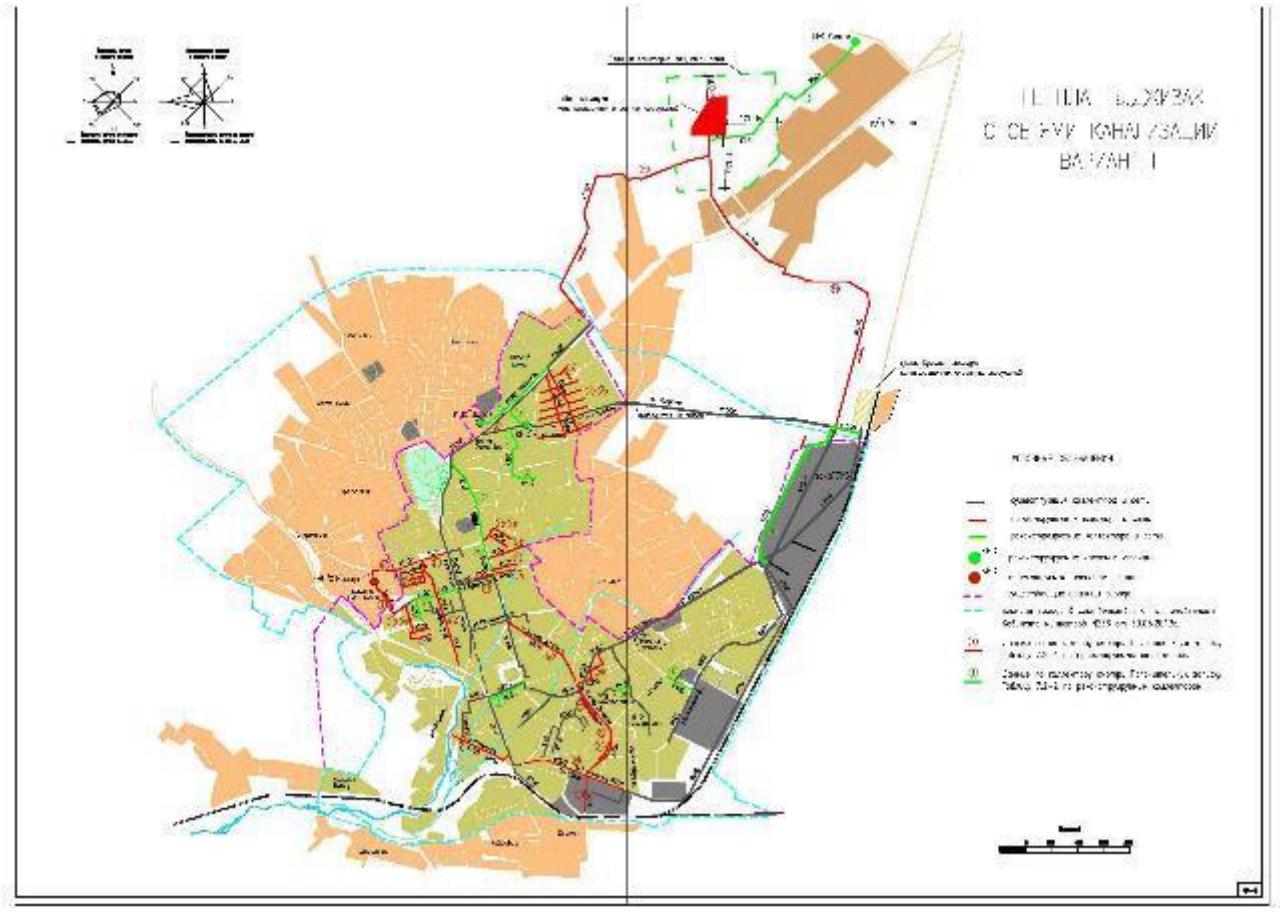


Figure 6: Existing sewage system in Djizzak city[38]

96. The sewage network coverage in Djizzak city is 28 %.[39] Mahalla Dustlik consisted mainly of private houses is not connected to the sewage networks and population use septic tanks located inside houses. Sewage from septic tanks is transported by the cesspool machine and disposed at the WWTP.

B. Water Supply and Sanitation Subcomponent

1. Planning works

97. The WSS subcomponent will include the following subcomponents:

- Reconstruction of water supply and sewerage systems in Djizzak;
- Supporting the effectiveness of the management of the water supply system in the city of Djizzak;
- Hygiene Promotion and Measures to Address COVID-19.

98. Details on the proposed interventions for Djizzak for this scope are outlined below.

a) Reconstruction of water supply and sewerage systems in Djizzak

a.1. Reconstruction and new construction of water conduits, total 39.91 km including:

- Reconstruction of the steel conduit from the water intake "Amir Timur" with the connection of the water intake "Sangzar" to the city of Djizzak with the implementation of electro-chemical protection with a total length of 12.5 km;
- Reconstruction of distributing conduits in the city of Djizzak, only 22.2 km
- New construction of distribution conduits in the city of Djizzak, only 5.21 km
- Installation. 15 pressure regulators and 22 air vent valves on distribution conduits.

[38] National Feasibility Study 2021
[39] Cities Development Initiative for Asia report, 2020

- Works on the implementation of a SCADA system for the city of Djizzak, as well as a leak management system (NRW) for MFIs Ittifoq, Yoshlik and Dustlik

a.2. Procurement and installation of mechanical water meters for subscribers and utility consumers of three mahallas (Ittifoq, Yoshlik, Dustlik) of the city of Djizzak (the number will be specified according to information from Djizzak Suvtaminot).

a.3. Installation of ultrasonic water meters on group and local water meters

- Installation of ultrasonic water meters at the points of connection to the water conduit Amir Timur-Sangzar-Djizzak (7 pcs.).
- Installation of ultrasonic water meters in the wells of group water intakes (47 pcs.).
- Installation of ultrasonic water meters on the wells of local water intakes in the absence of urban networks (7 pcs.).
- Installation of ultrasonic water meters on pressure lines of pumping stations of the second lift (9 pcs.).
- Installation of ultrasonic water meters (2 pcs.), pumps with frequency regulation (4 pcs.) and bactericidal plants for water disinfection (4 pcs.) at local water intakes Yoshlik, Zilol-1, Kimyogar and Zilol-5

a.4. Improvement of water supply in Ittifoq, Yoshlik and Dustlik mahallas

- Reconstruction of water supply networks in the Ittifoq mahalla, only 4.29 km
- Reconstruction of connections in the Ittifok mahalla (69 multi-storey buildings, 30 single-storey houses)
- Construction of water supply networks in the Dustlik mahalla, only 16.69 km.
- Construction of house connections to water supply networks in Dustlik mahalla (3 pcs - multi-storey buildings, 890 pcs - single-storey houses)

a.5. Improvement of the sewerage system

- Construction of sewerage networks in Dustlik mahalla, total 14.13 km
- Construction of house connections to sewer networks, 775 pcs

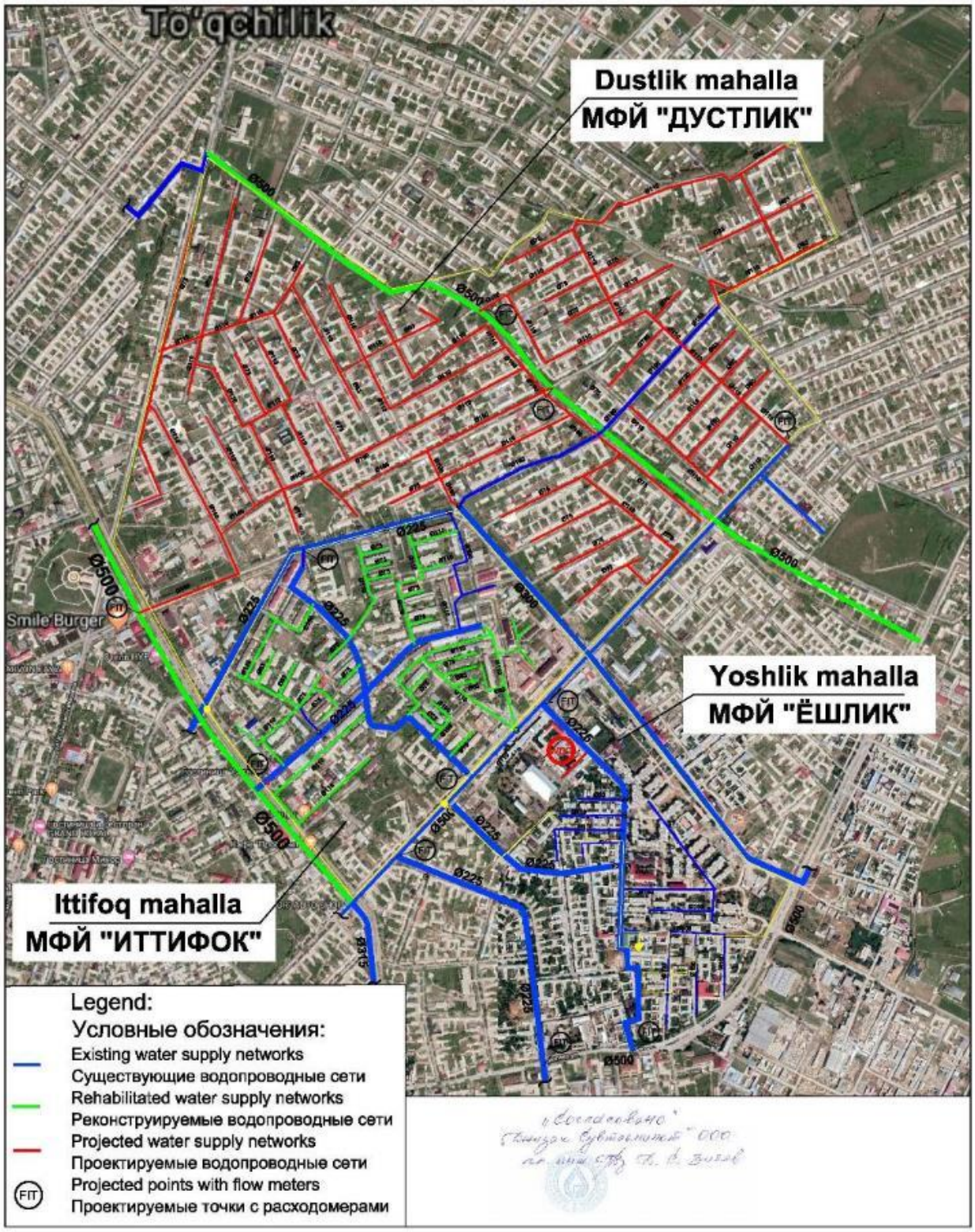
a.6. Construction of the fence for the water intake Amir Timur

- Construction of a fence made of reinforced concrete panels with a total length of 1838 m, as well as the construction of a fence made of euro-grid with a total length of 2412 m

a.7. Repair of chlorination equipment at Sangzar water intake

- Repair of chlorination equipment at the Sangzar water intake according to the proposal of the equipment manufacturer and conduct staff training.

99. Existing Djizzak Water Supply System is shown in **Figure 7**.



(Green lines – reconstructing network, blue – existing network, red – new construction)

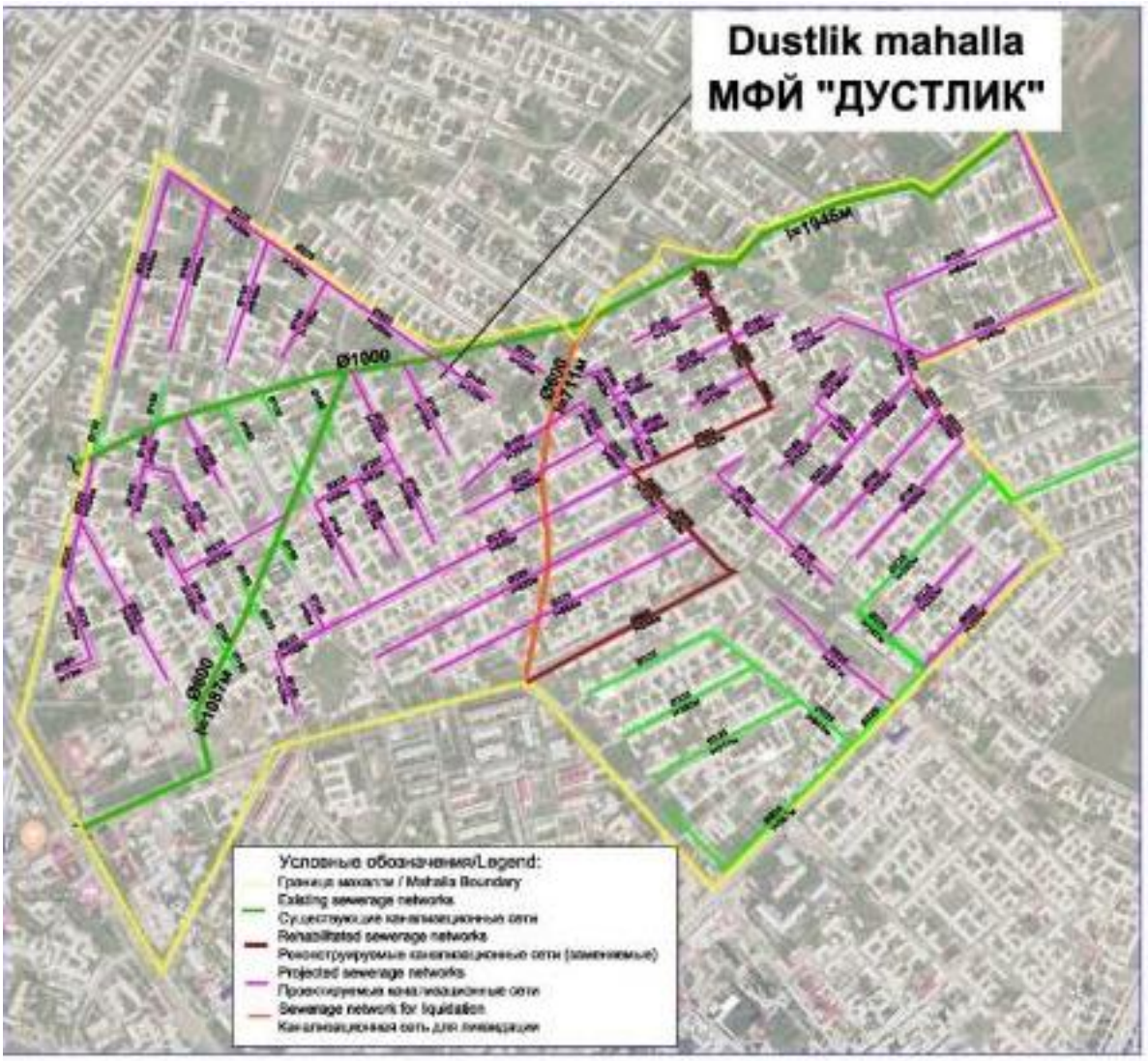
Figure 7: Scheme of proposing project works on Water Supply System in Dustlik and Ittifoq mahallas Existing water supply network

100. View of streets inside mahallas where construction and rehabilitation works will be implemented is presented below.

Figure 8: Examples of streets where construction and rehabilitation works will be implemented. Dustlik mahalla (June 2021)

Figure 9: Examples of streets where construction and rehabilitation works will be implemented. Ittifoq mahalla (June 2021)

101. Although a centralized sewerage project is being implemented in Djizzak City under the ADB financed the “Djizzak Sanitation System Development Project (footnote 37)”, this project focuses primarily on sewer trunk mains and does not provide lateral sewer connections in all mahallas. The rehabilitation and reconstruction of sewage network in Ittifoq and Yoshlik are being implemented under the State program. The Dustlik mahalla is not included in the program, therefore, this mahalla will be serviced with lateral sewers and provided with sewerage connections under IUDP. The location of the proposed lateral sewers is shown in **Figure 10**.



Existing sewage network (green lines – existing network, brown - replacing, purple – new construction)

Figure 10: Existing and proposing for construction sewage networks in Dustlik mahalla

102. View of streets where construction of sewage networks will be implemented is presented in below picture.

Figure 11: View of streets in Dustlik where sewage network will be constructed (June 2021)

103. The below map provides scheme of the rehabilitated conduit.

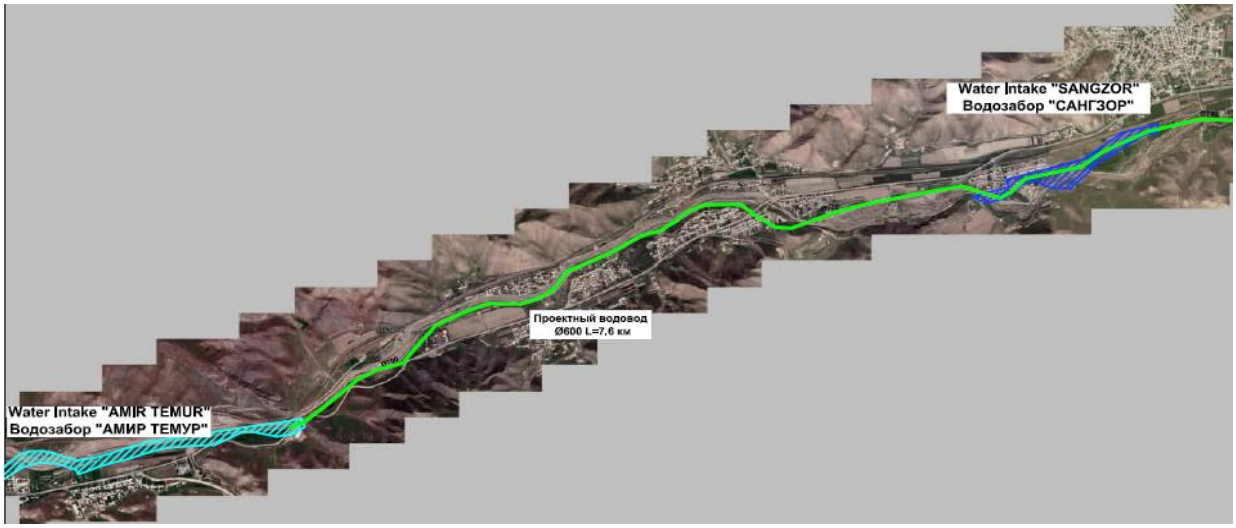


Figure 12: Scheme of the rehabilitated water pipeline

104. The project will include purchasing of new valves, air valves, and their subsequent installation on the distribution networks of the water supply system instead of the emergency approach currently being used. In total, it is planned to procure and install about 15 air valves with a diameter of 300-500 mm. View of air valves and their installation approaches are presented in **Figure 13**.

Example of air valves **Method of valves installation**

Figure 13: View of air valves and their installation approaches

(1) Installation of new mechanical water meters for apartments, for individual houses

(2) Installation of automation equipment, smart bulk water meters, pumps with* frequency *control and water disinfection system

105. The project provides the installation of ultrasonic water meters for water metering:

- At connections of settlements to the Amir Temur-Sangzar water pipeline;
- At the wells of underground group water intakes;
- On the outlet pipelines from the pumping stations of the lifting of the distribution units of the city of Djizzak;
- At local water intakes included in the project.

106. Depending on size of pipe, different types of water meters will be used. The examples of water meters are provided below.

Water meter for pipes with diameters less than 250 mm

Water meter for pipes with diameters more than 250 mm

Figure 14: Example of water meters

Figure 15: Example of water meter installation of water pipe at Kimyogar well intake (May 2021)

107. For 4 local water intakes (each consists of one well) connected to the general water supply system of the city (Zilol-1, Zilol-5, Kimyogar and Yoshlik), the project installs pumps with a variable speed and disinfection equipment (bactericidal lamps).

108. For Zilol-1, Zilol-5, Kimyogar wells a disinfection equipment (bactericidal lamps), and pumps will be done in the exiting building of wells intake. New building will be constructed only on the water intake "Yoshlik".

109. Water intake Zilol-1 is not fenced, therefore, to ensure buffer zone (30 m in radius[40]) the project will construct a mesh fence. The rest of the local water intakes are fenced.

110. Summary of works on local water intakes is presented in below table:

Table 19: Summary of works on local water intakes

#	Name of well	Installation of Fence	Installation of new pump	Construction of building	Installation of Bactericidal Lamp
1	Zilol-1	Yes	Yes	No	Yes
2	Zilol-5	No	Yes	No	Yes
3	Kimyogar	No	Yes	No	Yes
4	Yoshlik	No	Yes	Yes	Yes

[40] Construction Norms and Rules, Water supply, Tashkent 1997

Zilol-5 water intake (installation of pump and bactericidal lamp)

Zilol-5 water intake (installation of pump, bactericidal lamp, and fence)

Territory of Kimyogar water intake (installation of pump and bactericidal lamp)

Territory of Yoshlik water intake (installation of pump, bactericidal lamp, and construction pavilion)

Figure 16: Summary of works on local water intakes (June 2021)

(3) Implement a Supervisory *Control and Data Acquisition (SCADA)*

111. For the urban water supply system of the city of Djizzak, the project provides for a dispatching and process control system for group suspect SCADA. The project will implement SCADA system with the organization of a dispatching point at each water intake and a general dispatching point in administrative building of Djizzak Suvaminot LLC.

112. The Central Dispatch Center is represented by a personal computer installed in a dedicated room and designed for round-the-clock monitoring of the situation at water intakes and distribution centers, information from which other services, differentiated by access level, can also be viewed via the Internet.

113. The SCADA system will connect all newly installing and already existing water meters on each well and water distribution centers in Djizzak city with main Central Dispatch Center via programmable logic controller (boxes) which are also be installed on water intakes.

114. The installation of SCADA system will allow to implement:

- remote control of downhole equipment;
- monitoring of well parameters, pumping stations and reservoirs;
- analysis of water consumption and formation of requests for water consumption for each source;
- keeping a log of measurements;
- maintaining a unified database

(4) Development *of hydraulic model and GIS for Djizzak City water distribution system*

115. Currently, the Uzsuvtaminot (UzST)[41] does not have a single electronic map of the water supply system or the sewerage network, fully reflecting all assets' location. The UzST does not have a hydraulic model, so that the management of water distribution networks and main water conduits is carried out mainly based on the empirical experience of the staff. This approach leads to a decrease in both the overall efficiency of managing daily production processes and the effectiveness of long-term planning.

116. The introduction of GIS and a hydraulic model will allow the Djizzak Suvtaminot LLC to provide a more accurate accounting of fixed assets, improve the efficiency of emergency and repair work and improve the quality of customer service. Implementation of this subcomponent is necessary for the successful implementation of several other subcomponents, including SCADA implementation projects, energy efficiency approaches, and NRW reduction projects. In the future, the Djizzak Suvtaminot LLC staff is expected to introduce electronic maps and hydraulic models for other major water systems in the region.

117. This component involves the development of a detailed electronic model of the Djizzak water supply system, including all pumping stations and reservoirs. This component does not include civil works.

(5) Establishing an Asset Management System

118. Under the IUDP an Asset Management System (AMS) will be developed, and energy audit will be undertaken. The development of AMS will be undertaken in several stages:

- Prepare an asset register. This would follow on from the GIS map of the system that is proposed and should include details of all fixed assets; and
- Rate the condition of all assets. Prepare a valuation of the assets taking into consideration age and condition;
- Establish the required level of service for the system and the future demand;
- Develop a life cycle Management Plan of the assets, which will include:
  - Risk Management Plan
  - Routine Maintenance Plan
  - Renewal and Replacement Plan for Assets
  - Upgrading Plan for Assets
- Prepare a Financial Management Plan for Asset Maintenance, Renewal, Replacement, and Upgrading; and
- Prepare a Project Capital Renewal Works Program.

119. The energy efficiency activities can be carried out on two levels:

- Conduct an energy audit of the water supply system.
- Consideration of renewable energy (solar) for pumping installations.

120. These components will not include civil works.

(6) Procurement of Operation and Maintenance Equipment

121. Based on discussions with the Djizzak Suvtaminot LLC, it is proposed that the provision of the following operation and maintenance equipment be included in the IUDP loan. Details of the proposed equipment are outlined below**.**

- 2 emergency recovery vehicles,
- 2 excavators,
- 1 truck mounted crane,
- 1 dump truck,
- 1 minibus,
- 2 vehicles, Damas Labo,
- 1 trialed pneumatic mobile air compressor,

[41] Central government body with overall responsibility to improve water supply and wastewater services nationwide

- PVC welding equipment,
- 1 pipe detector,
- 1 mobile power generator,
- 1 welding machine

b) Hygiene Promotion and Measures to Address COVID-19

122. Interventions by IUDP that will serve to assist with the challenge of preventing the spread of COVID-19 and future such pandemics will be considered. These interventions will focus on Djizzak as they are primarily water supply related. Some of the interventions in Djizzak, especially those related to hygiene awareness, will be undertaken in close consultation with the State Sanitary and Epidemiological Service since they have the expertise and responsibility in this area.

123. For Djizzak city, the project provides for the construction of toilets in public places. In total, it is planned to build 5 toilets. All toilets will be connected to the existing sewage network and will be built in compliance with national standards. Municipal department for beatification under Djizzak city Khokimiyat will provide maintenance of the toilets.

124. Conceptual design of toilets was submitted for consideration to the Khokimiyat of Djizzak city. The location of the toilets and their capacity will be determined during the DED stage.

C. Existing Facilities

125. Besides civil works which will be implemented under the proposing Loan, some works will be done on existing water intakes. Such facilities require an environmental audit to review environmental compliance and development of Corrective Action Plan as needed. Two water intakes are considered as existing facilities – Sangzar and Amir Temur. The environmental audit was conducted through observation of the facilities performance and revision of presence of all required permissions. Next paras present the results of environmental audit of Amir Temur and Sangzar water intakes and a list of the required corrective actions.

1. Amir Temur Water Intake

126. The water intake site is located at 10-12 km to west of the Djizzak city. There are 16 ground water wells on the water intake, 3 of them are not operating. The ground water table varies from 7-10 m (in central part of water intake) up to 15-18m.

Figure 17: Amir Temur water intake (June 2021)

127. Water reserves amount approved for discharge is 60,500 m^3/year.[42] The actual capacity of the Amir Temur water intake is 16,800.0 m^3/day. The water intake area is 14 ha. The characteristics of the installed pumping equipment are shown in the following table.

[42] Approval for water withdraw is issued by the Committee on Geology and Mineral Resources

Table 20: Characteristics of the installed pumping equipment

#	Name	Productivity, m3 / hour		Pressure, m	Power, kW	
		Design	Actual		Design	Actual
1	Well No. 1	80	95		7.5	18.5
2	Well No. 2	80	45	22	7.5	7.5
3	Well No. 3	80	There is no water in the well, the pump is dismantled and installed at the Sangzar water intake			
4	Well No.4	80	The pump fell into the well, the well does not operate			
5	Well No. 5	80	65	20	7.5	18.5
6	Well No. 5a	80	65	25	7.5	7.5
7	Well No. 6	170	65	25	18.5	18.5
8	Well No.7	170	54	20	18.5	7.5
9	Well No. 7a	170	56	22	18.5	7.5
10	Well No. 8	170	72	20	18.5	18.5
11	Well No. 9	170	101	22	18.5	18.5
12	Well No. 10	170	68	20	18.5	18.5
13	Well No. 11	80	91	22	7.5	18.5
14	Well No.12	80	60	22	18.5	18.5
15	Well No. 13	80	Pump burned out		7.5	7.5
16	Well No.14	170	Well are not operating			

128. Location of wells on the territory of water intake is presented in **Figure 18**.

Figure 18: Territory of Amir Temur water intake, including water intake facilities and wells

129. Each well is located inside of closed building. Water from wells is pumped through pipeline to the central pipe located on the territory of the Amir Temur water intake. Central pipe is connected to the main pipeline connected to Sangzar water intake. There are no water measurement devices on the wells.

Figure 19: Well #5 (June 2021)

130. Water intake does not have a chlorination unit. Water is pumped to the main pipeline and disinfected at Sangzar water intake before supplying to Djizzak city.

131. Total number of staffs working on the water intake is 10 people. They work in 3 shifts, 2 specialists per shift (1 electrical machinist and 1 watchman). There is a gatehouse for the personnel, which is also used as a resting room (**Figure 20**).

Figure 20: Gatehouse/Resting room for the personnel (June 2021)

132. There is no shower room and dining room (food is not cooked, workers bring food with them from home) on the facilities. To ensure efficient recharging of ground water deposits, several water ponds were built on the territory of the water intake. There are 6 water ponds on the Amir Temur water intake's territory (**Figure 21** and **Figure 22**).

Figure 21: Sumps on the territory of Amir Temur water intake next to the wells (June 2021)

Figure 22: Location of sumps on the territory of Amir Temur water intake

133. The toilet is located on the territory of water intake (**Figure 23**), but the cesspool itself is located outside of the territory, next to the water intake's fence.

Figure 23: Toilet (June 2021)

134. The sanitary protection zone of wells located on the territory of Amir Temur water intake (**Figure 24**) ranges from 30 m and more, which complies with national standards[43] for buffer zone for drinking water sources.

[43] KMK 2.04.02-97 Water supply. External networks and facilities - * For water intakes located on the territory of the object, excluding the possibility of soil and groundwater contamination, as well as for water intakes located in favorable sanitary, topographic and hydrogeological conditions, the size of the first zone of the zone may be reduced in agreement with the local authorities of the sanitary and epidemiological service, but must be at least 15 and 25 m, respectively.

Figure 24: Sanitary-protection zone

135. Part of water intake fence is missing, starting from well 7a and up to well 10 (**Figure 25** and **Figure 26**).

Figure 25: non-fenced water intake area next to the well #10 (June 2021)

136. **Figure 26** and **Figure 27** shows that part of the unfenced area of the water intake is already occupied by cattle grazing and a corn field.

Figure 26: Unfenced area with corn fields

Figure 27: Cattle grazing and corn fields (June 2021)

137. There is not any warehouse where equipment can be repaired. Maintenance of all equipment, machinery and pumps is implemented in specialized workshops located outside of the water intake. Therefore, there are no fuel and oil on the territory of the water intake. There is also no designated place for collection of domestic wastes.

138. In accordance with project design, the following activities (**Figure 28** and **Figure 29**) are provided:

- Construction of parallel water pipeline to the existing one for 80 m inside the Amir Temur water intake;
- Installation of plug with d = 700 m;
- Connection of new pipeline to existing water pipeline at the picket 0.

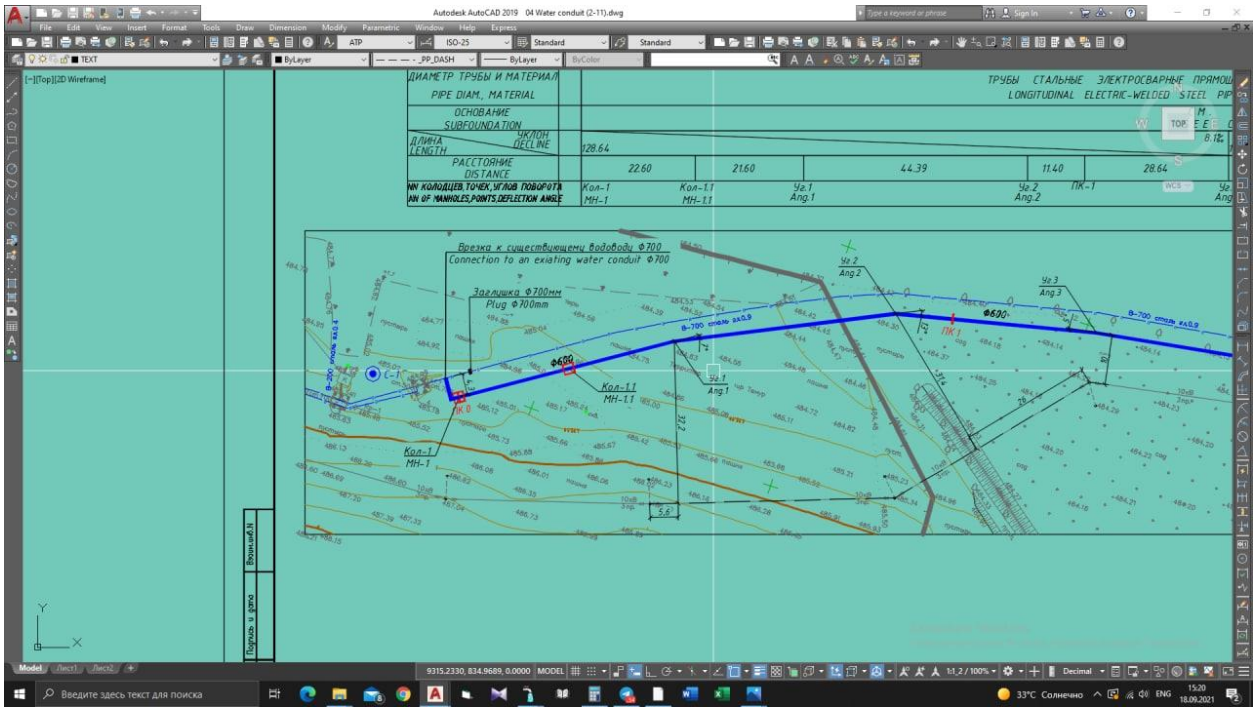


Figure 28: Scheme of connection new pipeline to existing water pipeline

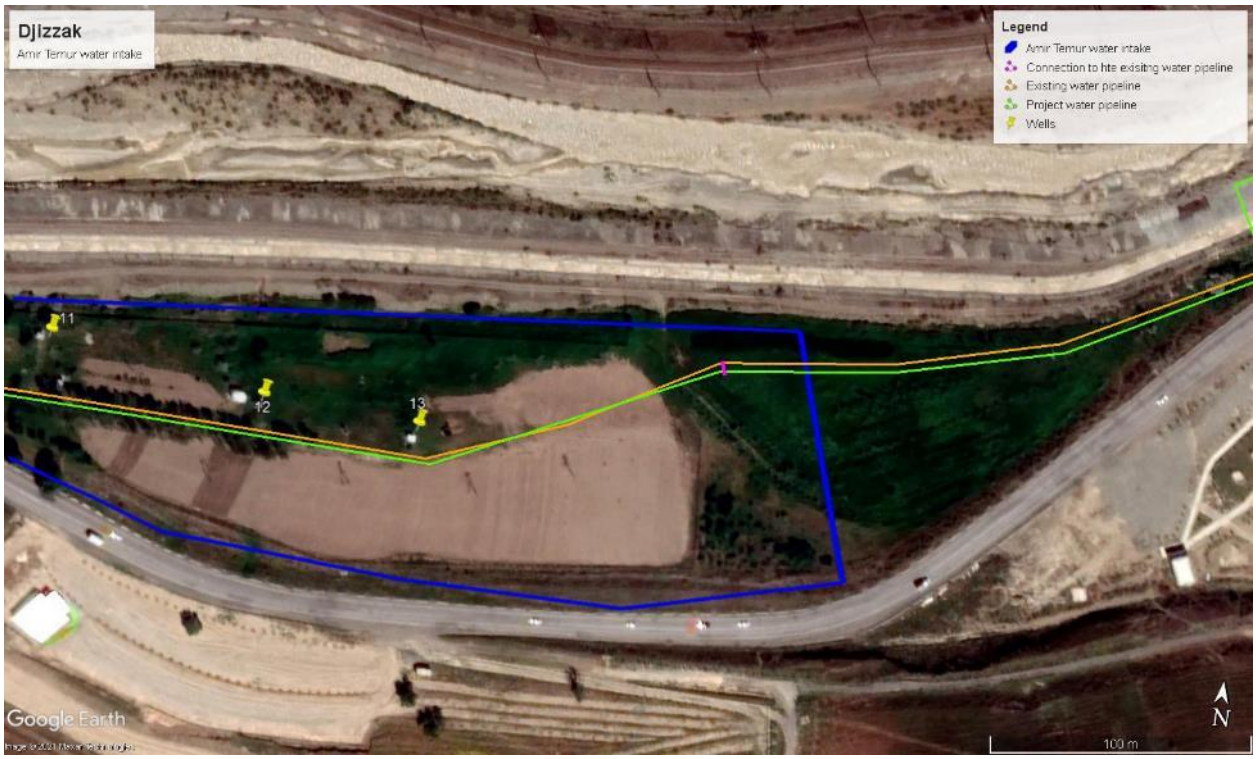


Figure 29: Location of connection new pipeline to existing water pipeline

2. Sangzar Water Intake

139. The site is in the southern part of the Djizzak city on the right bank of the Sangzar River. The approved deposit for the intake is 38,900 m^3/year.[44] The design capacity of the project water intake is 10,000.0 m^3/day, the actual water intake capacity is 6,500.0 m^3/day (including stand-by wells). The water intake area is 10.49 ha. The depth of wells varies from 15 to 20 m.

140. The characteristics of the installed pumping equipment are shown in the following table.

Table 21: Characteristics of pumps installed on wells

#	Name	Productivity, m^3/hour		Pressure, m	Power, kW	
		Design	Actual		Design	Actual
1	Well No. 4		Pump burned out			9.2
2	Well No. 5	70	54	30	9.2	9.2
3	Well No. 6	70	54	30	9.2	9.2
4	Well No. 7a	70	54	30	9.2	9.2
5	Well No. 8	70	54	30	9.2	9.2
6	Well No. 8a	70	54	30	7.5	7.5
7	Well No. 9		54	30	9.2	9.2
8	Well No. 9a	70	Pump burned out		9.2	9.2
9	Well No. 10	70	110	60		22.0
10	Well No. 10a	70	Pump burned out		9.2	9.2

141. According to the National Feasibility Study, currently 10 wells are used at the water intake (**Figure 30**), of which the pumps are not working in 3 wells (pumps have burned out).

Figure 30: Location of Sangzar water intake, including water intake facilities and wells

142. 10 people work on the territory of the water intake. They work in 3 shifts, every day there are 2 people constantly (1 chlorinator and 1 driver).

143. The structure of the water intake includes a chlorination unit with a capacity 2 kg/h (**Figure 31**). Chlorination process is based on usage of natrium hypochlorite (liquid chlorine). Water coming from Amir Temur water intake is blended with water from Sangzar water intake, chlorinated, and then sent to the Uzbekistan water intake for further supplying of Djizzak city. At the stage of the audit, the chlorination unit was not operating due to some technical issue. Sangzar water intake staff explained that temporary water is chlorinated at the Uzbekistan water intake.

[44] Maximum amount of water which could be withdrawn without risk of depletion. Established by the State Committee on Geology and Mineral Resources.

Figure 31: Chlorination building and chlorination room (June 2021)

Figure 32: Warehouse (June 2021)

144. There is a toilet and a shower room on the territory of the water intake. However, the shower room was not operating during the inspection. The toilet is not connected to sewage network, it is equipped with hydro isolated cesspool, which is located outside of buffer zones of ground water wells. The closest distance from the toilet until closest well is 43 m (**Figure 33**).

Figure 33: Cesspool (June 2021)

145. Sanitary protection zone of the wells located on the territory of Sangzar water intake (**Figure 34**) ranges from 15 m to 55 m, which complies with national regulatory standards (footnote 43). Whole territory of Sangzar water intake is fully fenced. There is not any warehouse where equipment can be repaired. Maintenance of all equipment, machinery and pumps is implemented in specialized workshops located outside of the water intake. Therefore, there are no fuel and oil on the territory of the water intake. There is also no designated place for collection of domestic wastes.

Figure 34: Sanitary-protection zone

146. In accordance with project design, the following works (**Figure 35** and **Figure 36**) will be provided:

- Construction a parallel water pipeline to the existing one for 1735 m inside the Sangzar water intake;
- Installation of plug with d = 700 m;
- Installation of flow meter on the main pipeline;
- Connection of new pipeline to existing water pipeline at the point # 94;
- Repair of chlorination equipment at the Sangzar water intake according to the proposal of the equipment manufacturer and conduct staff training;

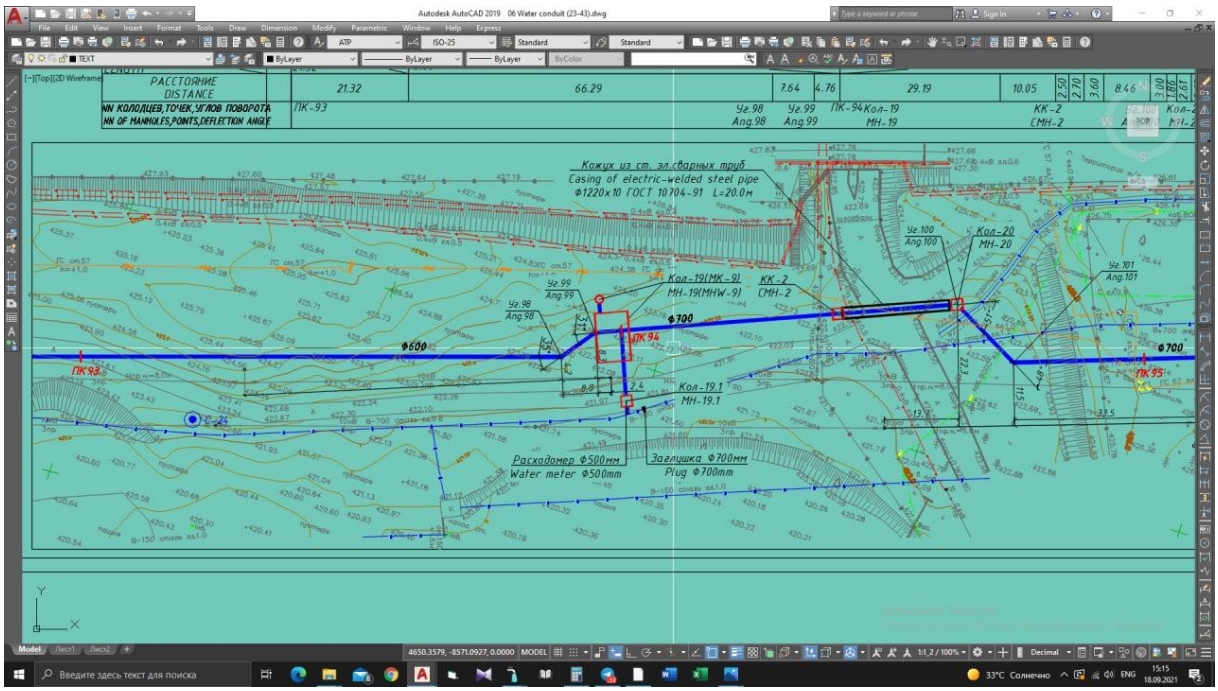


Figure 35: Scheme of connection to existing water pipeline

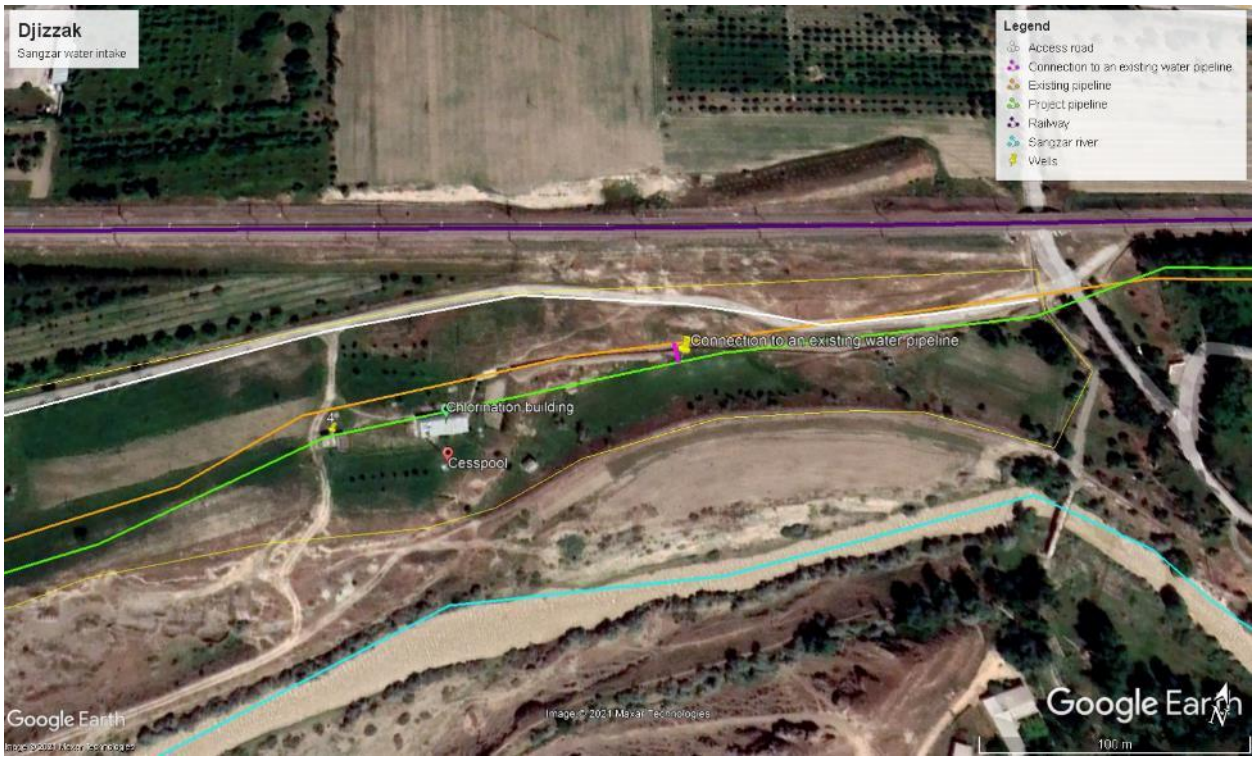


Figure 36: Location of connection to existing water pipeline

3. Corrective Actions for the Existing Facilities

147. Based on the results of conducted audit, the following corrective actions will be implemented by Djizzak Suvtaminot LLC to fulfill national requirements for ground water intakes. The cost required for the implementation of the corrective actions # 1, 2, 5 and 6 will be part of the Project, and the remaining items (# 3,4, 6 and 7) will be implemented at expenses of the Djizzak Suvtaminot LLC. This have been discussed with and agreed by Djizzak Suvtaminot LLC, MIFT and ADB in December 2021.

Table 22: Corrective Actions for Amir Temur and Sangzar water intakes

#	Identified non-compliances	Corrective Actions	Responsibility	Timing for implementation	Cost
	Amir Temur water intake				
1	Incomplete fence of intake which allow enter cattle to the territory of water intake.	Complete fencing of whole territory of water intake (4 km)	Contractor	Within first two months after Contract becomes effective	$650,000 (included in the Project's main works contract)
2	Improper equipment of fire protection facilities	Ensure equipment of water intake with fire protection facilities in accordance with national standards	Contractor	Within first two months after Contract becomes effective	$500 (included in the Project's main works contract)
3	Outdated permission on water use	Ensure that permissions on water use are received in accordance with national requirements	Djizzak Suvtaminot LLC	Prior to Loan disbursement	Included in operation cost of Djizzak Suvtaminot LLC
4	Agricultural activities on the territory close to ground wells # 7a and 10	Ensure that fence installation is fully completed and ensure that there are no any agricultural activities on the territory of water intake	Djizzak Suvtaminot LLC	Prior to Loan disbursement	Included in operation cost of Djizzak Suvtaminot LLC
	Sangzar Water Intake				
5	Existing breaks in operation of chlorination unit	Ensure proper work of chlorination unit	Contractor (financed by Djizzak Suvtaminot LLC)	Within first two months after Contract becomes effective	$50,000 Cost is included into budget as the main works
6	Lack of knowledge on safe maintenance of chlorination unit.	Conduct regular training on health and safety during maintenance of chlorination unit	Contractor during construction phase; and Djizzak Suvtaminot LLC during operation phase	Within first two months after Contract becomes effective	Cost is included in Contractor and Djizzak Suvtaminot LLC budget
7	Outdated permission on water use	Ensure that permissions on water use are received in accordance with national requirements	Djizzak Suvtaminot LLC	Prior to Loan disbursement	Included in operation cost of Djizzak Suvtaminot LLC
	Total				**$700,500**

IV. DESCRIPTION OF THE ENVIRONMENT

148. This chapter presents the baseline of the project area under the following headings:

- Physical environment.
- Biological environment.
- Cultural heritage.
- Socio-economic conditions.
- Climate Change.

149. Baseline data has been collated from desktop research of available data. Secondary data was collected from various government agencies. Climatic data was obtained from the Centre of Hydrometeorological Service at the Cabinet of Ministers of the RUz (Uzhydromet).[45] A separate desk study and site visits were conducted for the assessment of biological resources in the project area. Socioeconomic data was obtained from yearbooks and from socio-economic reports prepared under the current project. Data on cultural resources was collected from available sources and city consultations.

150. The baseline monitoring of water and air quality, noise level was conducted. Results of monitoring is presented in the following chapter and **Appendix 6.** Results of baseline environmental monitoring.

A. Introduction

151. This section presents the baseline of the project area under the following headings:

- Physical Environment
  - Climatic conditions
  - Air quality
  - Geography and Topography
  - Water Resources
  - Soils
- Biological Environment
  - Flora
  - Fauna
  - Protected Areas & Habitats
- Cultural Heritage
- Socio-economic Environment
- Climate Change

152. The location of WSS subcomponent cities is shown in Figure 37. Baseline data has been collected based on desktop research of available data. Secondary data was collected from various government agencies. Climatic data from Gulistan (data for Djizzak) meteorological station (where requested parameters are being observed by Uzhydromet and the closest to the sites) on temperature, wind and extremal weather conditions was obtained from the Centre of Hydrometeorological Service at Cabinet of Ministers of the Ruz (Uzhydromet).

[45] Including climatic data (temperature, wind and extreme weather conditions), and surface water flow and quality data for water courses in Djizzak province.

Figure 37: Project city location

B. Physical Environment

1. Climatic conditions

153. By its natural and climatic conditions, Djizzak province belongs to the zone of sharply continental climate: summers are hot and dry, and winters are relatively mild. The average temperature in January is between + 1°C, to + 4°C, and in July it is between + 26°C and + 28°C. Up to 400-500 mm of precipitation falls during the year. The vegetation period lasts 240-260 days. Relative humidity is 78-80%, and in the summer 20-40%.

154. In the area of Djizzak city, western, northern, and north-western winds coming from Tamerlane Gates[46] prevail. Average monthly wind speed is 1.4 – 26.7 m/sec.

155. Cold air entering from northern part of the province causes sharp fluctuations in temperature. Frosts occur even in late spring, and damages fruit trees and crops.

156. Climatic map of Djizzak province is presented in **Figure 38,** below.

[46] Tamerlane Gates - the narrowest part of the Sangzar river gorge – it is a passage in the mountains separating the Malguzar and Nuratau ridge (Uzbekistan), located in 15 km from Djizzak city. The width of the gorge, formed by almost sheer rocky walls, is 35 m. A highway and a railway from Tashkent to Samarkand pass along the gorge. At the top of the rocks there are inscriptions, including ancient ones, in Persian. One of them was made by order of Ulugbek, the astronomer and ruler of Samarkand, the grandson of Tamerlane.

Figure 38: Climatic map of Djizzak province

157. Data on climatic conditions for period 2018-2020 collected from the meteorological station Gulistan (**Figure 42**) in the project sites is presented in **Figure 39**.

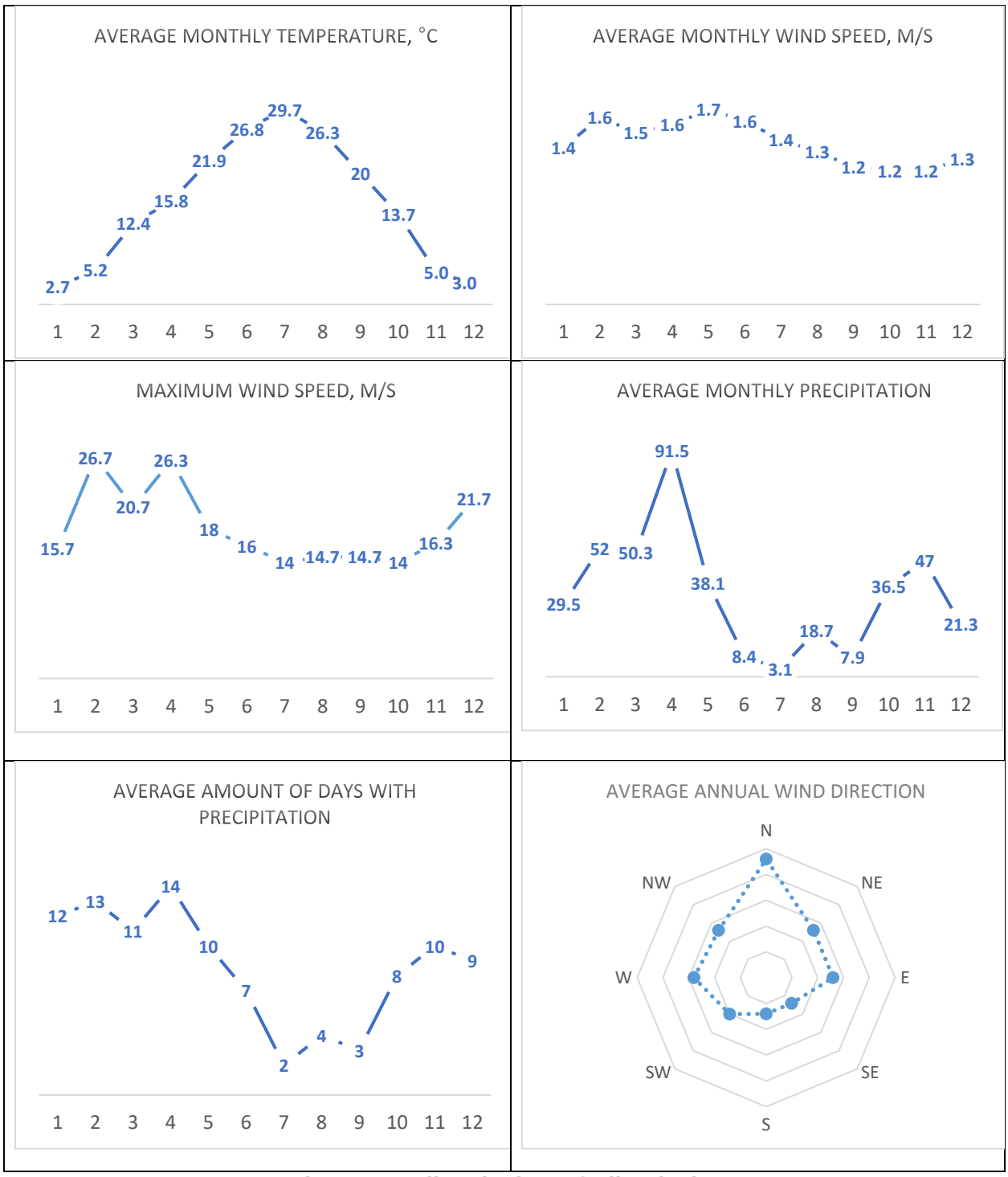


Figure 39: Climatic data of Djizzak city

158. The number of days with atmospheric phenomena according to the Gulistan meteorological station for period 2018-2020 is shown in the **Table 23**.

Table 23: Average value of atmospheric phenomena for 2018–2020 year

Year	Month	Heavy rain	Rain	Drizzle	Ice rain	Liquid precipitation	Snow	Heavy snow	Snow grains	Solid precipitation	Hail	Dew	Frost	Black ice	Mist	Fog (all types)	Haze	Dust storms	Dust storms and snowdrift	Storm
2018-2020	**1**	6	4	2	0	10	5	1	0	5	0	1	14	1	8	6	0	0	0	0
2018-2020	**2**	9	3	1	1	11	4	1	0	4	0	1	7	1	5	2	0	0	0	1
2018-2020	**3**	11	1	1	0	11	1	1	0	1	0	13	2	0	1	0	0	0	0	2
2018-2020	**4**	14	1	0	0	14	1	0	0	1	0	12	1	0	1	1	0	1	1	3
2018-2020	**5**	10	0	0	0	10	0	0	0	1	1	9	0	0	0	0	0	0	0	8
2018-2020	**6**	7	0	0	0	7	0	0	0	0	0	2	0	0	0	0	0	1	1	5
2018-2020	**7**	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2018-2020	**8**	2	0	0	0	2	0	0	0	0	0	3	0	0	0	0	0	1	1	1
2018-2020	**9**	3	0	0	0	3	0	0	0	0	0	7	0	0	0	0	0	0	0	0
2018-2020	**10**	6	0	0	0	6	0	1	0	1	0	7	3	0	0	0	1	1	1	1
2018-2020	**11**	6	2	1	0	7	4	0	1	4	0	8	11	2	4	2	0	0	0	1
2018-2020	**12**	6	3	2	0	8	3	0	0	3	0	3	9	1	14	7	0	0	0	0

2. Air Quality

159. The results of air quality monitoring for 2018-2020 are presented in **Figure 40**. According to data the ambient air quality in Djizzak city complies with standards – Maximum Allowed Concentration (MAC).

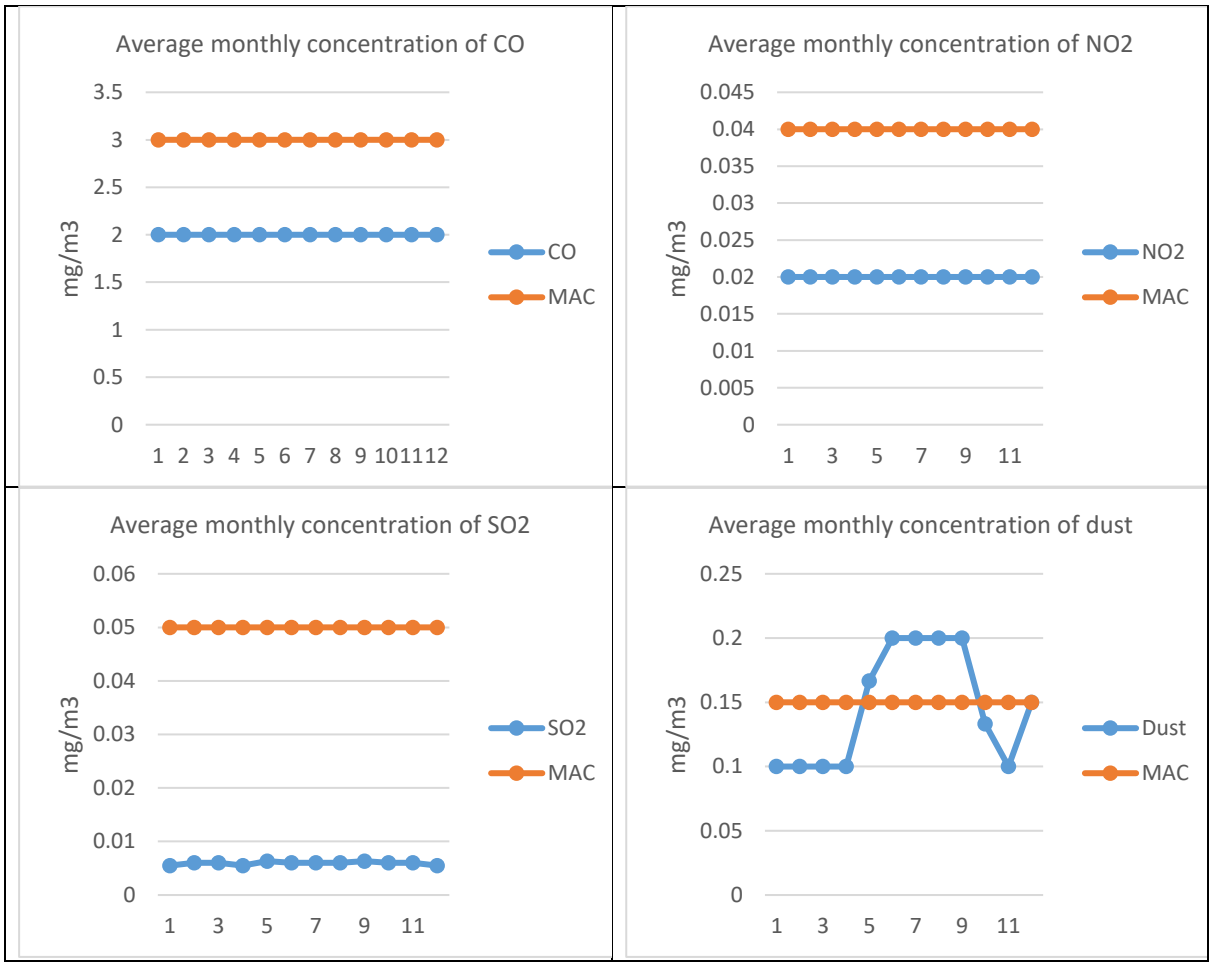


Figure 40: Ambient air quality data of Djizzak city

3. Geography and Topography

160. Djizzak province is in the central part of the country, between the Syrdarya and Zarafshan rivers. It borders in the north and northeast with the Republic of Kazakhstan and Syrdarya province, in the southeast with the Republic of Tajikistan, and in the west and southwest with Navoi and Samarkand provinces. The total area of Djizzak province is 21.17 km^2. The central, northern, and northwestern parts of the province are in Hungry Steppe[47] and Kyzylkum desert. The province is framed by spurs of the Turkestan Ridge (Malguzar) from the south, and from the west – by spurs of Nuratin Ridge, which are separated from Turkestan Ridge by the narrow Valley of Sangzar river.

161. The center of Djizzak province is Djizzak city (**Figure 41**). Djizzak is located on a flat area, where in the north-eastern part the height is 362 m above sea level, and in the south-eastern part it is 373 m. The slope of the city's relief is 0.2% on average.

162. Seismic zoning of the province territory belongs to the 7-seismic magnitude zone (The zones range from 1 to 9 with 9 being the worst).

[47] Hungry steppe (Mirzachul) is a clay-saline desert in Central Asia (Uzbekistan, South Kazakhstan, Zafarabad region of Tajikistan). It is located on the left bank of the Syrdarya, upon its exit from the Fergana Valley. The area is about 10,000 km².

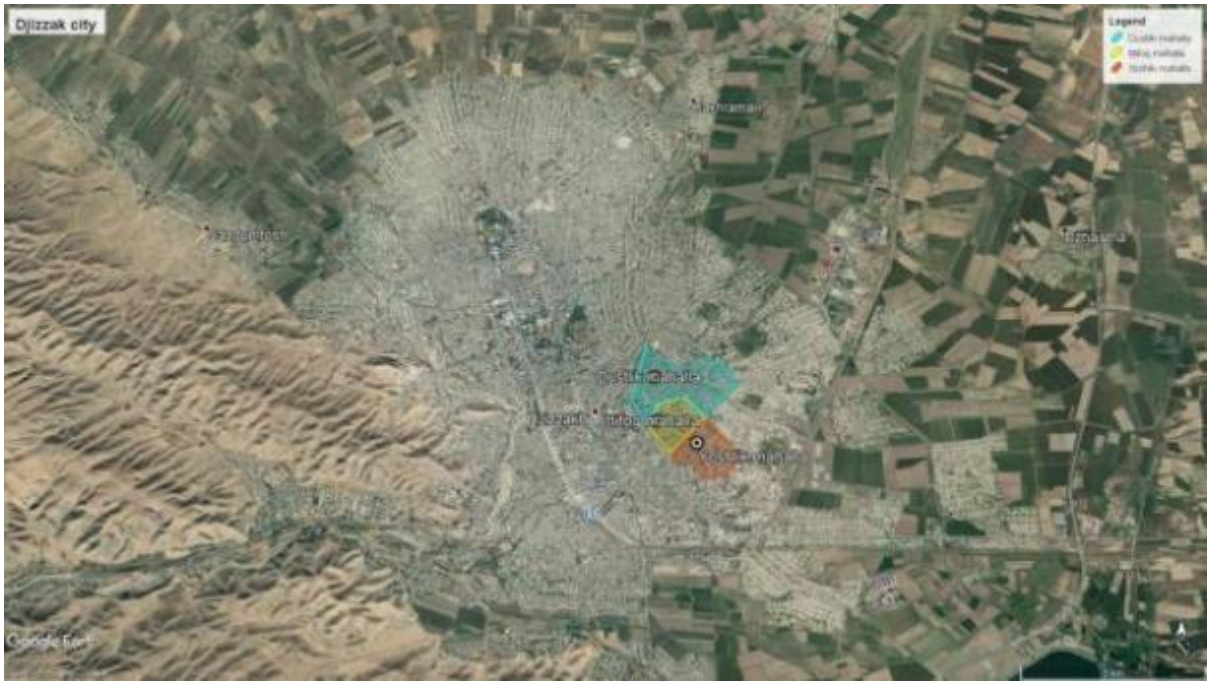


Figure 41: Djizzak city

4. Water Resources

163. The main waterways of the province are the Sangzar and Kly rivers. There are also numerous mountainous watercourses, such as the Achisay, Jalair, Ravat and others that flow down from the slopes of Turkestan and Nuratin Ridges (**Figure 42**). The province has water reservoirs and lakes; the closest reservoir to the project area is Djizzak reservoir, the distance is 3-5 km. The largest reservoir is the Aydar-Arnasay system of lakes (AASL) that cover an area of more than 350,000 ha. AASL is in two provinces: Djizzak and Navoi. The distance between AASL and Djizzak city is more than 45 km.

164. In Djizzak city the Sangzar river turns northward and as it passes Kly Village it is diverted into the Kly river, 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.

165. The hydrology of Djizzak is dominated by the network of built canals and collectors which carry water diverted from all mountain runoff waters, as well as effluent discharged from WWTP, industries and general surface runoff from precipitation. This system of artificial canals has reshaped the provinces surface hydrology, resulting in the formation of the Aydarkul lake, located along the northern border of the province.

166. The main waterways and its remoteness from subcomponents' sites are presented in **Figure 42**. The territory is characterized by the presence of both natural and artificial watercourses.

167. The largest natural streams are the Sangzar and Zaaminsu rivers. The Sangzar river originates at an altitude of about 1,900m above sea level from the confluence of two springs Dzhantyke and Guralash. The Sangzar River, with a total length of 198 km (from its source to the Kly village), has a drainage basin with an area of 2,530 km^2. The Sangzar River basin occupies the western part of the mountain range, bordering the hungry steppe from the south.

168. The fan of the Sangzar River is a modern channel that occupies a part of the territory in the west. Within the city limits, the modern floodplain was embedded in concrete. The width of the riverbed is 50-100 m and depth is 5-7 m. The average annual discharge of the river is 2.29 m^3/s, the maximum is 33.7 m^3/s, and the minimum is 0.43 m^3/s.

169. In the city of Djizzak, the river turns to the north – towards the village of Kly, where it already has the same name. The region has a well-developed irrigation network that supplies water from the Sangzar river for domestic water supply. Further, the Sangzar river flows into the Aydar-kul lake.

170. Vegetation along the Sangzar River is typical for high-mountain belts – adyrs and it is represented by plant families belonged to cenotype – Ephemeroidopoia, Formation: *Bluegrass, Perovskieta scrophularifoliae,* Elytrigieta trichophorae.

171. The speed of Sangzar river is very high. No information was found on the river aqua fauna, a review of the scientific literature showed the presence of algae of the class Bacillariophyta. There are no species included in the national Red Book or IUCN.

172. The rehabilitated main pipeline will cross Sangzar river at two points (Figure 58). Some parts of the main pipeline will go along the river. There are not any water streams inside project mahalla.

173. Mitigation measures to be applied to prevent contamination of Sangzar river during construction phase are presented in Chapter V.B.2.a)(4) on page 97).

174. The Zaamin-su river is the second largest in the region. Since it is completely outside the proposed project area, it is not considered further in this project.

175. In the Djizzak province, underground waters in the flat area are close to the surface, the depth of underground waters does not exceed 3-4 m. Ground waters are mineralized, coming out to the surface, causing soil salinization. With an increase in the height of the relief, the depth of groundwater occurrence increases, on the foothills and plains it is 10-25 m, while the degree of salinity decreases. Ground waters in mountainous areas are associated with river valleys and are shallow (4-5 m), have high taste characteristics. In the mountainous and foothill areas of the Djizzak province, 209 springs were recorded downstream with cold waters, which are confined to the Nurata-Turkestan group of hydrogeological massifs.

Figure 42: Main waterways and its remoteness from subcomponents' sites

5. Soils

176. In the Djizzak province, most of the flat territory is occupied by light gray soils. In the Hungry Steppe, these soils are salty, loamy, and clayey in texture, while at the northern foot of the Nurata ridge, they are eroded skeletal or cartilaginous and pebble-loamy soils. In the east of the Hungry Steppe, meadow-serozem soils, saline and slightly saline soils are developed. A characteristic feature of light gray soils is the presence of small reserves of humus (11.8%) and, accordingly, nitrogen. The high carbon content and alkaline reaction promotes the transition of phosphorus into difficult-to-digest forms. In addition, light gray soils undergo secondary salinization during irrigation. The main reasons for soil salinization are associated with unsatisfactory drainage due to the lack of an optimal collector-drainage network, lack of leaching and agricultural practices, evaporation of filtered water reaching the gypsum horizon.

177. In the extreme north of the flat territory of the province, semi-stable sands with spots of desert sandy soils are widespread. In the south of the province, on the slopes of the Turkestan ridge and its spurs, the soil cover has vertical zoning. Typical gray soils, clayey and loamy, sometimes eroded soils are widespread in the foothills and in the hilly foothills up to an altitude of 1,000-1,200 m. In the high foothills at an altitude of 1,200-1,400 m, dark clay and loamy soils are developed, mostly eroded. In the middle zone of the mountains at an altitude of 1,400-2,500 m, brown clay and loamy erosion prevails, in some places – gravel and brown mountain loamy or gravel soils. More than 2500 m brown eroded gravel soils are common among rocks and talus and have small spots – light brown alpine soils, gravel, with rock outcrops. In the eastern part of the Nurata ridge, which is part of the Djizzak province, vertical zoning is of limited development, since the height of the mountains does not exceed 2,000 m. Typical foothills and the lower belt of the Nurata mountains are typical and dark gray soils, in the middle zone of the mountains and on the watershed – brown soils. Due to the desert climate of this mountain range, the soils here are skeletal, thin, highly eroded with frequent outcrops of bedrocks. In the northwest of the province, large areas are occupied by sands, salt marshes and takyrs located between them.

178. Typical serozem soils are limited to higher areas of foothill plains and hilly foothills, forming a belt of the middle zone. The Djizzak province is located on 300 – 450 m. The humus profile is more distinct, gray, and pale gray; the humus content in its upper part is 1.5-2.5%, in arable soils – 1.0-1.5%. The profile is wetted by precipitation up to 1.5 m. Weakly saline genera are less common than among light gray soils. Brown soils develop under the cover of shrubs, grasses and various herbaceous vegetation on clays, loams, yellow-brown, alluvial, and dense bedrocks. The humus content in brown soils is on average 5-8%.

179. The natural resources of the province include deposits of marble, limestone, and gypsum. Nonferrous metals are found in mountainous provinces. The northern foothills of the Turkestan ridge and Malguzar are undulating loess plain. In Djizzak province, light and typical serozem and meadow-serozem soils of plains, meadow and meadow-boggy soils of river valleys are used for irrigated agriculture or are lands of promising development. Typical and dark eroded gray soils of the foothills and low mountains are used for grazing livestock and rainfed ones. The brown soils of the middle mountain belt are used as pastures.

180. Soil map of Djizzak province is presented in **Figure 43** below.

Figure 43: Soil map of Djizzak province

C. Biological Environment

1. Flora

181. In general, the natural vegetation of the Djizzak province occupies an area not suitable for plowing. In the north of the Djizzak region, ephemeral juzgunniks with an admixture of singrene and white saxaul prevail on fixed and semi-fixed sands, and wormwood and saltwort

prevail on gravel and saline areas. At the northern foot of the Nurata ridge, ephemeral wormwoods prevail on gravelly light gray soils. On the undulating plain of the northern foothills of the Malguzar mountains and the Turkestan ridge, on light gray soils, ephemeral-ephemeroid vegetation is widespread, which is replenished by representatives of drought- resistant perennial motley grasses – scurfy pea, cousinia, and phlomis as the mountains approach. In the hilly foothills of the Turkestan ridge and in the low mountains of Nuratau, on typical sierozems, perennial drought- resistant motley grass prevails over ephemeroids and ephemeroids. In the high foothills and middle belt of the Turkestan ridge, Malguzar and Chumkartau, in the middle belt and in the watersheds of Nuratau within the limits of heights of 1200-2200 m on typical and dark sierozems and partially on brown soils ephemeroid couch grasslands with wormwood are widely developed. Due to the dryness of these mountainous areas, mesophytic motley grasses and large grasses are not widespread here.

182. On the Turkestan ridge and its spurs, in the upper reaches of the rivers Sangzar and Zaaminsu, at altitudes exceeding 2,000 m, a typical type of vegetation is juniper, alternating with areas of wheat grassland steppes, and in drive-separated parts – with the typical steppe vegetation and mountainous xerophytes. Juniper forests in the upper reaches of Sangzar and Zaamin are protected. Highland vegetation has very limited development and is represented by spots of alpine meadows on the ridges of Turkestan ridge, Malguzar and Chumkartau, exceeding 2500 m.

183. A total of 28 of plant species inscribed in the Red Book of the Ruz grow in the territory of Djizzak province. A total of 26 of them are endemic, such as the Astragalus reedy-bubbly, Olga’s Stubbendorfiya, Isakul’s onion, Shirach Lacteous-flowery, Sage Calvish and others. There are 44 species of animals inscribed in the Red Book of Uzbekistan that also live in the province; four of them, the Fedchenko’s Assassin Bug, Shestakov’s Digger Wasp, Sulfur Flowerfly and Desert Monitor, are endemics.

184. The map of vegetation of Djizzak province is presented in **Figure 44** below.

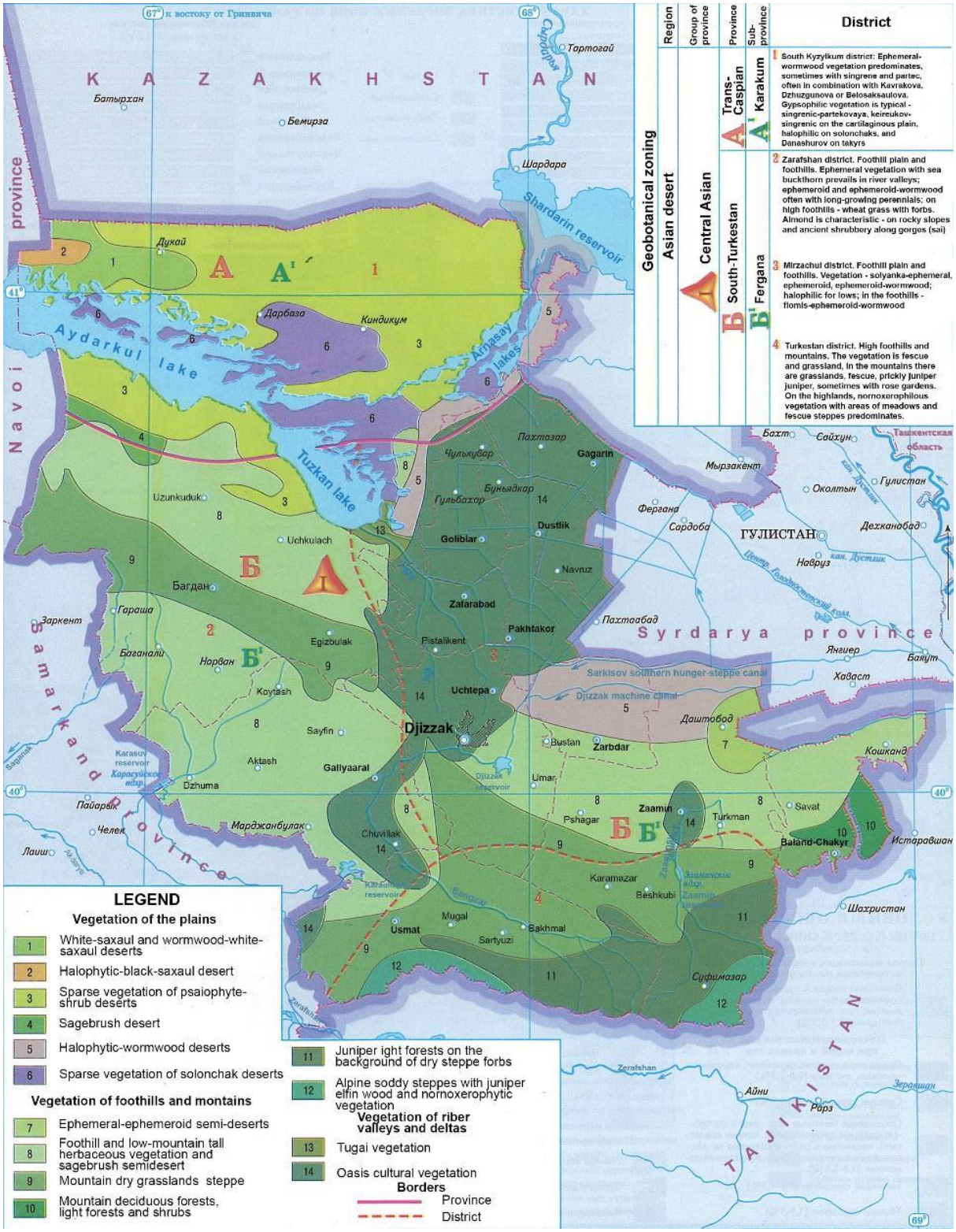


Figure 44: Map of vegetation of Djizzak province

2. Fauna

185. The Project area is in a foothill (along the water pipeline) and urban (in mahallas) environment and as such, flora and fauna are typical for these zones. The fauna of the project area is represented by foothill species, dominated by reptiles, rodents, and birds, with low species diversity. Typical vegetation for Project area is represented by annual plants, fruit trees, bushes and poplars shown in **Figure 45**.

Figure 45: Vegetation in Project area (May 2021)

186. The map of fauna of Djizzak province is presented in **Figure 46** below.

Figure 46: Fauna map of Djizzak province

3. Protected Areas & Habitats

187. There are four specially protected natural areas, and five important bird areas (IBA) in the province (

188. **Table 24**):

Table 24: Main Protected Natural Areas and IBA Zones in Djizzak province

SPNA name, organization year	Location		Area, km²	IUCN Category
	Administrative conformity	Geographical location		
Reserves				
Zaamin mountain-juniper Reserve (1926; 1960)	Djizzak province (Zaamin and Bakhmal districts)	Pamir-Alay, Northern Slope of the Turkestan Range	268.4	I
Nurata mountain-nut-fruit Reserve (1975)	Djizzak province (Farish province)	Pamir-Alay, Northern slopes of the central part of the Nurata Range	177.52	I
National parks				
Zaamin National Park (1976)	Djizzak province (Zaamin district)	Pamir-Alay, Northern Slope of the Turkestan Range	241.1	II
Preserves				
Arnasay (1983)	Djizzak province	Arnasay water system	663.0	IV
Important Bird Areas (IBA)				
North Aydarkul	Djizzak province, Navoi province	50 km northeast of the district center of Nurata	1,581.98	
Arnasay Lake System	Djizzak province (Mirzajul district)	45 km northwest of the city Gagarin	317.06	
Tuzkan Lake	Djizzak province (Arnasay and Farish provinces)	35 km west of the village of Dustlik	1,077.32	
Nurata Range	Djizzak province (Farish province); Samarkand province (Payaryk and Koshrabat districts)	in the central part of the Nuratau ridge, 120 km west of the city of Djizzak	346.81	
Jum-Jum	Djizzak province (Bahmal district)	north-western spurs of the Turkestan Range, 60 km east of the city of Samarkand and 50 km south of the city of Djizzak	415.17	

189. The remoteness of subcomponents from the main natural protected areas is shown in **Figure 47,** below. As it was confirmed by representatives of the SCEEP, there are no Red List species on the territory of Djizzak city and adjusted area.

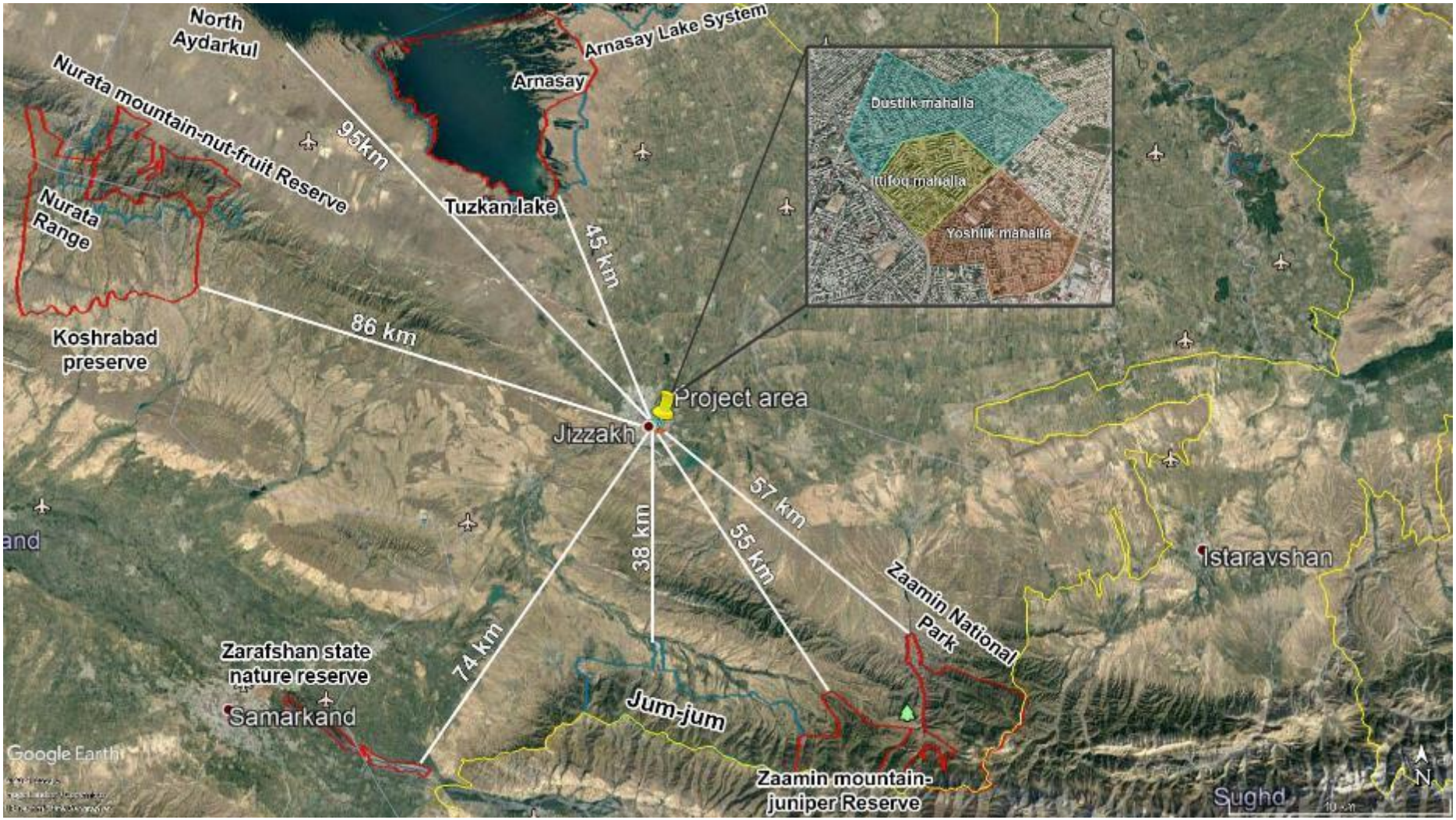


Figure 47: Main protected areas close to Djizzak subcomponents

D. Cultural Heritage

190. Among the natural protected areas, there are the Tamerlane Gate (the road laid in the mountains and forming a "gate" of rocks), Khoja Nuriddin XIX madrasah, Gubdin-ota spring and others. Some of them are shown in **Figure 48**.

Figure 48: Some architectural monuments close to Djizzak

E. Socio-economic conditions

191. Djizzak province was founded on 29 December 1973. The administrative center of the province is Djizzak city. The province is divided into 12 administrative districts: namely Arnasay, Bakhmal, Dustlik, Farish, Gallaorol, Djizzak, Mirzachul, Pakhtakor, Yangiabad, Zaamin, Zafarobod, Zarbdor. The administrative division of Djizzak province is presented in **Figure 49** below.

Figure 49: Administrative map of Djizzak province

192. 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.

193. Djizzak city was founded in 1918 in the western part of the Djizzak province and today is the administrative and economic center of the Djizzak province. Djizzak is in the central part of the RUz between the capital of the country - Tashkent, located 170 km to the northeast, and Samarkand, located 90 km to the southwest, on the Sangzar River, at the northern foot of the Nurata Mountains and the southern part of the Hungry Steppe.

194. Djizzak is an important transport junction connecting the eastern regions with the center and the west and is connected with other cities of the republic by a railway line going west to the Samarkand city, east to the Tashkent city.

195. The territory of the city occupies about 100 km^2 (9640 ha), of which land allotted for buildings is 12.9%. Djizzak is located on a flat area, where in the north-eastern part the height is 362 m above sea level, and in the south-eastern part it is 373 m. The slope of the city's relief is 0.2% on average.

196. Administratively, the city is divided into 34 mahallas with a total population of 176,643 people as of 1 January 2021.

197. The population size by 3 project mahallas (Ittifoq, Dustlik and Yoshlik) is presented in the following table (according to the data of the passports of mahallas of Djizzak).

Table 25: Population size by project mahallas

No.	Name of mahalla	Number of population (2021)		
		Population, people	Households	Families
1	Dustlik mahalla	4,525	704	890
2	Yoshlik mahalla	4,693	1,052	1,092
3	Ittifoq mahalla	12,050	2,620	3,050
	In total in all city mahallas	**176,643**	**32,628**	**40,407**

198. Within the territory of the city, a Specialized Industrial Zone (SIZ), “Djizzak”, was created in March 2013. The land area reserved for the SIZ is 244 ha. About 87.8% of the city population is Uzbek. The other major ethnic groups include Russians (3.9%), Tajiks (1.7%) and others (6.6%). The city is divided into 35 urban mahallas. There are 2,560 small business enterprises in the city, including 38 farms with average areas of 38 ha, 10 industrial enterprises, and 32 joint-venture enterprises. The social infrastructure includes 26 kindergartens, 30 schools (including two specialized), 2 musical schools, 9 vocational colleges, 3 academic lyceums, and 2 universities. There are 22 clinics in the city.

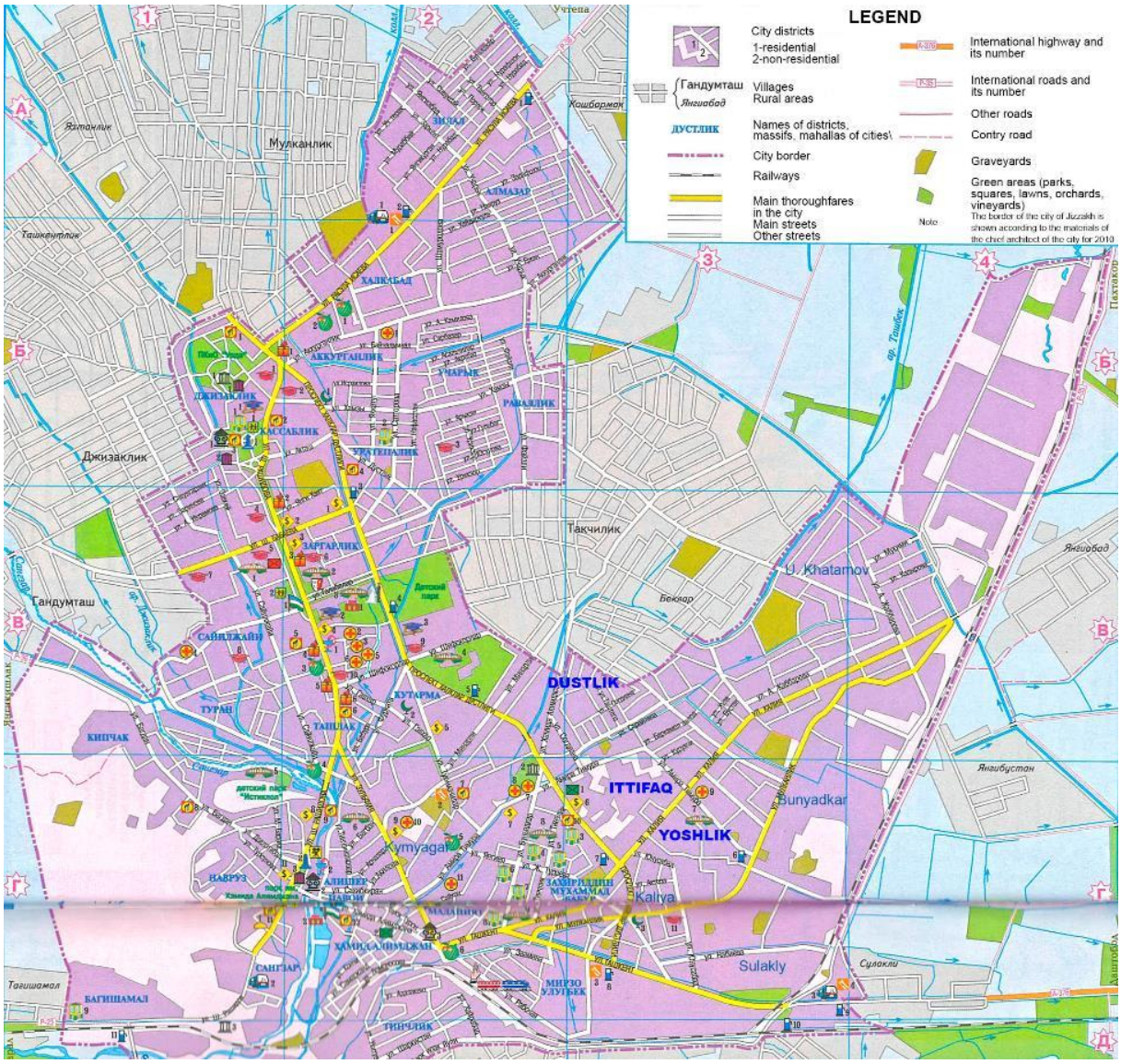


Figure 50: Administrative map of Djizzak city

F. Climate Change

199. Uzbekistan signed the United Nations Framework Convention on Climate Change (UNFCCC) in 1993 and ratified the Kyoto Protocol in August 1999. Uzbekistan, as a party to the Convention, pursues the consistent policy aimed at decrease in greenhouse gases (GHG) emission in the key sectors of economy. The Government has adopted several documents associated with regulation of actions and implementation of measures in climate change. The tangible success has been achieved in implementation of the Kyoto Protocol mechanisms. 15 Clean Development Mechanism Projects have been registered in the Executive Council of UNFCCC and 14 million tons of CER (Certified Emission Reductions) were put into practice. Uzbekistan occupies the first place among the CIS and Eastern Europe countries by number of registered CDM projects.

200. According to the Government decision, the Agency responsible for implementation of the UNFCCC is the Centre of Hydrometeorological Service at Cabinet of Ministries of the RUz (Uzhydromet). There is the National Secretariat of UNFCCC in the Uzhydromet as permanently operating body that coordinates activities for fulfillment of the country's commitments. The Director General of Uzhydromet is the National Focal Point for implementation of the UNFCCC in Uzbekistan. The Climate Change Information Center operates also under Uzhydromet.

201. Trends in change of air temperatures for various regions of the country's territory may be evaluated starting from 1925. The highest warming rates are observed in the northern part of republic and in large cities (0.30-0.43°C over 10 years), and the least ones in mountain zone (0.10-0.14°C over 10 years). Moderate warming rates are observed in the regions where irrigation has been developed over the considered period. The average warming rates by Uzbekistan is 0.27°C over 10 years.

202. In all seasons of year considerable increase in air temperatures is observed, however warming rates in winter period in Uzbekistan have been slowed down. For period from 1950 to 2013, the average rates of air temperatures increase over each 10 years were as follows: 0.13°C in winter, 0.39°C in spring, 0.25°C in summer, and 0.31°C in autumn. The revealed linear trends in seasonal air temperatures change (apart from winter temperatures) were statistically significant. Over the recent 50 years, seasonal air temperatures were increased by 0.8°C in winter, 2.5°C in spring, 1.6°C in summer and 2.0°C in autumn.

203. As already mentioned, the implementation of the pilot projects is planned in four cities: Khiva, Djizzak, Yangiyer and Havas. As for the sensitivity to the climate change, Djizzak city located in Djizzak province is found less sensitive to the climate change.

204. For assessment of climate change impact in Uzbekistan it was selected three scenarios of GHG emissions with use of the MAGICC5.3 (Model for the Assessment of Greenhouse-gas Induced Climate Change): (i) The softest scenario reflects global warming within range of 2°C against pre-industrial period. It is scenario of CO_2 stabilization at the level of 450 ppm (WRE450), which envisages introduction of strict measures for restriction of GHG emissions; (ii) Moderate scenario assumes CO_2 stabilization at the level of 750ppm (WRE750), which will lead to increase in global temperature 3°C up to year 2100; (iii) Extreme scenario (A1FI), by year 2100, increase in global temperatures will reach 4.9°C, and concentration of carbon dioxide will approach to 990 ppm.

205. This Climate Change assessment (CCA) Report was prepared under TA-8556 REG: Supporting the Cities Development Initiative for Asia[48] - Project Preparation Study (PPS) for the ADB Integrated Urban Development Project in Uzbekistan, which was being funded and implemented by the Cities Development Initiative for Asia. The assessment of the project impact on Climate Change is provided in Chapter IV.F.

[48] 47285-001: Supporting the Cities Development Initiative for Asia | Asian Development Bank (adb.org)

V. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

206. Description of the main project works is presented below:

207. Construction of the main pipeline will be carried out in parallel with the existing one which is mainly underground. The existing pipeline will not be removed from the ground. In accordance with national regulation, the right of way for this type of pipeline is 30 m. As per engineering team, in fact, construction works will be implemented within 10 m from the trench. Excavated soil, pipes will be placed within these 10 m, all necessary construction equipment will also move within this distance. The pipeline diameter will be from 600 to 700 mm, steel pipes with a service life of 25 - 30 years.

208. The depth of the trenches for laying pipeline will vary between 2.2 and 2.3 m. Sand or sifted local soil will be filled in at the base of the trench. When passing the route near residential buildings, inventory boards will be installed for safety purposes. It is planned that the construction camps will be located on the territory of the Sangzar or Amir Temur ground water intake facilities.

209. The depth of trench inside the mahalla networks will vary from 1.2 to 1.7 m, the pipelines with a range of diameters from 63 mm to 225 mm will be used, the material of the pipe is polyethylene with 50-years of service life. The polyethylene pipeline with diameter 150-300 mm will be used for sewage networks and pipes will be laying on the depth 1.2 - 2.5 m. In one section the depth will reach 3 m.

210. The schematic drawing of pipeline's and their location inside ground is presented in below **Figure 51**.

211. For rehabilitation of 4 operating water wells (Kimyogar, Yoshlik, Zilol-1 and Zilol-5), old pumps will be replaced with new more energy efficiently pumps. The old pumps will be transferred to Djizzak Suvtaminot LLC for further usage. After checking technical conditions of the pumps, they could be installed on other wells with less capacity or could be disposed at appropriate disposal site in the city.

212. Besides new pumps, the wells will be equipped with new water flow meters. For Zilol-5, new fence will be installed due its absence.

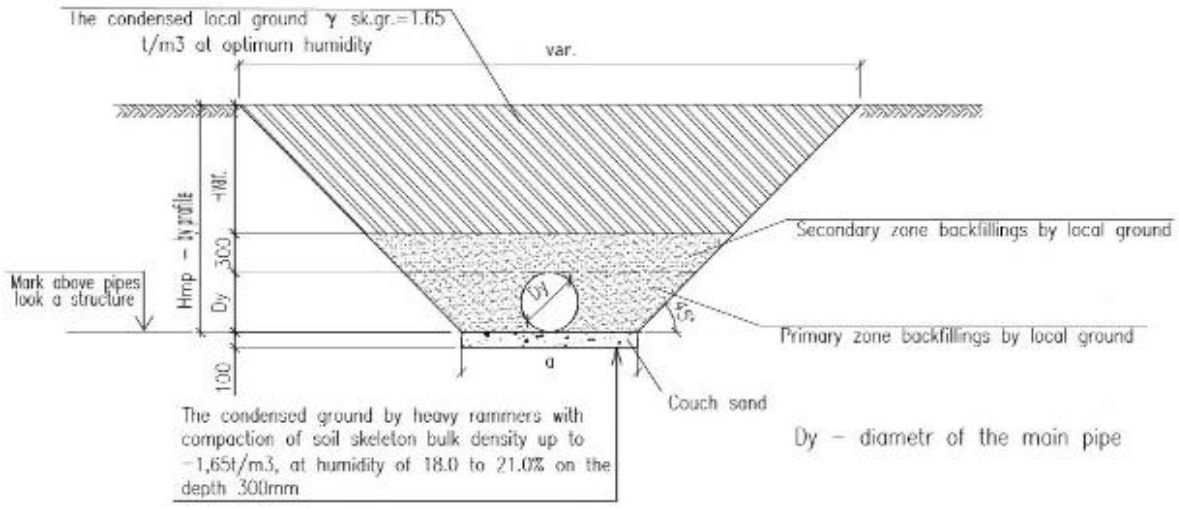


Figure 51: Staking of pipes in a trench with slopes in subsiding soils

A. Impact Assessment Methodology

213. Impact identification and assessment starts with scoping and continues through the remainder of the environmental assessment process. Interactions with the potential for

significant effects are subjected to a detailed impact assessment. The principal environmental assessment's steps comprise the following:

- **Impact prediction**: to determine what could potentially happen to resources or receptors as a consequence of the Project and its associated activities.
- **Impact evaluation**: to evaluate the significance of the predicted impacts by considering their magnitude and likelihood of occurrence, and the sensitivity, value and/or importance of the affected resource or receptor.
- **Mitigation and enhancement**: to identify appropriate and justified measures to mitigate negative impacts and enhance positive impacts.
- **Residual impact evaluation**: to evaluate the significance of impacts assuming effective implementation of mitigation and enhancement measures.

1. Identification and Characterization of Impacts

214. An 'impact' is any change to a resource or receptor caused by the presence of a project component or by a project-related activity. Impacts can be negative or positive and are described in terms of their characteristics. Impact characteristics are defined in the subsections below.

a) Type of Impact

- *Direct*: applies to an impact which can be clearly and directly attributed to a particular environmental or social parameter;
- *Indirect*: applies to impacts which may be associated with or subsequent to a particular impact on a certain environmental or social parameter;
- *Cumulative*: Multiple and successive environmental and social impacts from existing developments can reinforce each other, leading to more serious consequences on environment and people than each of the developments separately.

b) Duration of impact

- *Temporary* - applies to impacts whose effects are limited to a period of less than 3 years, or only associated with Project pre-construction or construction phases.
- *Short-term*: applies to impacts whose effects are limited to a five-year period.
- *Long-term*: applies to impacts whose effects last longer than a period of five years but limited to within the project lifetime.
- *Permanent:* applies to impacts whose effects last longer than the life of project – i.e. irreversible.

c) Extent of impact

- *On-site*: impacts that are limited to the Project site.
- *Local:* impacts that are limited to the Project site and adjacent properties.
- *Regional*: impacts that are experienced at a regional scale.
- *National*: impacts that are experienced at a national scale.
- *Trans-boundary/International:* impacts that are experienced outside of Uzbekistan.

d) Frequency of impacts

215. The frequency of an impact the measure of the constancy or periodicity of an impact, described using numerical values or a qualitative description (daily, weekly, monthly).

e) Likelihood

216. Likelihood is a measure of the degree to which the unplanned event (e.g. incidents, spills) is expected to occur. The likelihood of an unplanned event occurring is determined qualitatively, or when data is available, semi-quantitatively. Definitions of likelihood as applied in the IEE are provided as follows:

- *Unlikely*: The event is unlikely but may occur at some time during normal operating conditions
- *Possible*: The event is likely to occur at some time during normal operating conditions.
- *Likely*: The event will occur during normal operating conditions (i.e. it is essentially inevitable).

2. Evaluation of impacts

217. A consistent approach to the assessment of impacts will be followed to enable environmental and social impacts to be broadly compared across the IEE. A set of generic criteria are used to determine significance and are applied across the various environmental and social parameters.

218. As far as possible, environmental and social impacts will be quantified. Where it is not possible to quantify impacts, a qualitative assessment will be conducted using professional judgement, experience and available knowledge, and including the consideration of stakeholder views. Where there are limitations to the data, and/or uncertainties, these will be recorded in the relevant chapters, along with any assumptions made during the assessment.

219. To determine the significance of each impact, two overall factors are considered:

- Magnitude and nature of impacts
- **The** importance and/or sensitivity of the environmental and social receiving parameter, as determined during the assessment of baseline conditions.

3. Magnitude of impacts

220. After impacts characterization they are assigned a “magnitude”. Magnitude is typically a function of some combination (depending on the resource/receptor in question) of the following impact characteristics:

- extent
- duration
- scale
- frequency

221. For biophysical impacts, the semi-quantitative definitions for the spatial and temporal dimension of the magnitude of impacts used in this assessment are provided as follows:

- **High Magnitude Impact** affects an entire area, system (physical), aspect, population or species (biological) and at sufficient magnitude to cause a significant measurable numerical increase in measured concentrations or levels (to be compared with legislated or international limits and standards specific to the receptors) (physical) or a decline in abundance and/ or change in distribution beyond which natural recruitment (reproduction, immigration from unaffected areas) would not return that population or species, or any population or species dependent upon it, to its former level within several generations (physical and biological). A high magnitude impact may also adversely affect the integrity of a site, habitat or ecosystem.
- **Moderate Magnitude Impact** affects a portion of an area, system, aspect (physical), population or species (biological) and at sufficient magnitude to cause

a measurable numerical increase in measured concentrations or levels (to be compared with legislated or international limits and standards specific to the receptors) (physical) and may bring about a change in abundance and/or distribution over one or more plant/animal generations, but does not threaten the integrity of that population or any population dependent on it (physical and biological). A moderate magnitude impact may also affect the ecological functioning of a site, habitat or ecosystem but without adversely affecting its overall integrity. The area affected may be local or regional.

- **Low Magnitude Impact** affects a specific area, system, aspect (physical), group of localized individuals within a population (biological) and at sufficient magnitude to result in a small increase in measured concentrations or levels (to be compared with legislated or international limits and standards specific to the receptors) (physical) over a short time (one plant/animal generation or less but does not affect other trophic levels or the population itself), and localized area.

4. Sensitivity of receiving parameter

222. In addition to characterizing the magnitude of impact, the other principal step necessary to assign significance for a given impact is to define the sensitivity of the receptor. The universal sensitivity of receptor is low, medium and high.

223. For ecological impacts, sensitivity is assigned as low, medium or high based on the conservation importance of habitats and species. For socio-economic impacts, the degree of sensitivity of a receptor is defined as the level of resilience (or capacity to cope) with sudden social and economic changes. Criteria for deciding on the value or sensitivity of biological and socioeconomic receptors are presented as follows:

224. *High:* For ecological receptors, specifically protected under Uzbek legislation and/or international conventions e.g. For social receptors, those affected will not be able to adapt to changes and continue to maintain pre-impact status.

225. *Medium:* For ecological receptors, not protected or listed but may be a species common globally but rare in Uzbekistan with little resilience to ecosystem changes, important to ecosystem functions, or one under threat or population decline. For social receptors, those able to adapt with some difficulty and maintain pre-impact status but only with a degree of support.

226. *Low:* For ecological receptors, not protected or listed as common / abundant; or not critical to other ecosystem functions (e.g. key prey species to other species). For social receptors, those affected can adapt with relative ease and maintain pre-impact status.

5. Assessing the significance of impacts

227. To assess the significance of an impact, the sensitivity of the receiving environmental or social parameter is considered in association with the magnitude of the impact, according to the matrix shown in **Table 26** below.

Table 26: Impact significance matrix

Magnitude of impact	Sensitivity of receiving receptor		
	Low	**Medium**	**High**
Negligible	Negligible	Negligible	Negligible
Low	Negligible	Minor	Moderate
Medium	Minor	Moderate	Major
High	Moderate	Major	Major

228. While the above matrix provides a framework for the determination of significance and enables comparison across environmental and social parameters, a degree of professional

judgement must be used, and some parameter-specific factors considered in deciding of impact significance.

229. Below provides additional guidance to the degrees of significance in the IEE. Positive impacts provide resources or receptors, most often people, with positive benefits. Note that positive impacts are defined, but not rated for significance.

- *Major significance*: an accepted limit or standard may be exceeded, or large magnitude impacts occur to highly valued/sensitive resource/receptors. An aim of impact assessment is to get to a position where the Project does not have any major residual impacts, certainly not ones that would endure into the long-term or extend over a large area.
- *Moderate significance*: has an impact magnitude that is within applicable standards but falls somewhere in the range from a threshold below which the impact is minor, up to a level that might be just short of breaching a legal limit. Clearly, to design an activity so that its effects only just avoid breaking a law and/or cause a major impact is not best practice. The emphasis for moderate impacts is therefore on demonstrating that the impact has been reduced to a level that is as low as reasonably practicable.
- *Minor significance*: a resource/receptor will experience a noticeable effect, but the impact magnitude is sufficiently small and/or the resource/receptor is of low sensitivity/ vulnerability/ importance. In either case, the magnitude should be well within applicable standards.
- *Negligible significance*: a resource/receptor (including people) will essentially not be affected in any way by a particular activity, or the predicted effect is deemed to be 'imperceptible' or is indistinguishable from natural background variations.

6. Mitigation Potential and Residual Impacts

230. A key objective of an IEE is to identify and define socially, environmentally and technically acceptable and cost-effective measures to manage and mitigate potential impacts as well as actions to enhance positive Project benefits. Mitigation measures are developed to avoid, reduce, remedy or compensate for potential negative impacts, and to enhance potential environmental and social benefits.

231. The approach taken to defining mitigation measures is based on a typical hierarchy of decisions and measures, as described in **Table** 27. The priority is to first apply mitigation measures to the source of the impact (i.e., to avoid or reduce the magnitude of the impact from the associated Project activity), and then to address the resultant effect to the resource/receptor via abatement or compensatory measures or offsets (i.e. to reduce the significance of the effect once all reasonably practicable mitigations have been applied to reduce the impact magnitude).

232. Once mitigation measures are declared, the next step in the impact assessment process is to assign residual impact significance. This is essentially a repeat of the impact assessment steps discussed above.

Table 27: Mitigation hierarchy

Avoid / reduce at source: avoiding or reducing at source through the design of the Project (e.g., avoiding by siting or re-routing activity away from sensitive areas or reducing by restricting the working area or changing the time of the activity).
Abate on Site: add something to the design to abate the impact (e.g., pollution control equipment).
Abate at Receptor: if an impact cannot be abated on-site then control measures can be implemented off-site (e.g., traffic measures)

Repair or Remedy: some impacts involve unavoidable damage to a resource (e.g., material storage areas) and these impacts require repair, restoration, and reinstatement measures
Compensate in Kind; Compensate Through Other Means where other mitigation approaches are not possible or fully effective, then compensation for loss, damage and disturbance might be appropriate (e.g., financial compensation for degrading agricultural land and impacting crop yields)

233. Once mitigation measures are declared, the next step in the impact assessment process is to assign residual impact significance. This is essentially a repeat of the impact assessment steps discussed above, considering the assumed implementation of the additional declared mitigation measures.

a) Residual Impact Assessment

234. Once mitigation measures are declared, the next step in the impact assessment process is to assign residual impact significance. This is essentially a repeat of the impact assessment steps discussed above, considering the assumed implementation of the additional declared mitigation measures.

b) Cumulative Impacts

235. A cumulative impact is one that arises from a result of an impact from the Project interacting with an impact from another activity to create an additional impact. How the impacts and effects are assessed is strongly influenced by the status of the other activities (e.g. already in existence, approved or proposed) and how much data is available to characterize the magnitude of their impacts.

236. The approach to assessing cumulative impacts is to screen potential interactions with other projects based on:

- Projects that are already in existence and are operating;
- Projects that are approved but not yet built or operating; and
- Projects that are a realistic proposition but are not yet built.

B. Result of Impacts Assessment

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

1. Pre-construction stage

Impacts

238. During pre-construction stage the following aspects may impact on effectiveness of implementation of environmental safeguards during whole project cycle and may lead to non-compliance with requirements: (i) environmental requirements that are not included in bidding documents and contracts, (ii) non-compliance with requirements to obtain approvals and permissions per national legislation, and, (iii) non-compliance of goods, equipment and machinery procurement does not comply with the ADB Prohibited Investment Activities List set forth at Appendix 5 of ADB SPS and national standards on exhausted gases.

239. Main part of civil works will be implemented inside settlements with developed utility networks. Most of part of utilities networks goes underground, therefore obtaining agreement from the relevant agencies (gas supply, communication, etc.) prior to commissioning of civil works will be included as requirement for awarded contractors.

240. Some changes in design route of main water supply pipe (trunk) and water supply and sewage networks may take place at the stage of the DED. If there are any unanticipated

impacts, the IEE/EMP will be updated to account for any additional or new environmental impacts and relevant corrective actions.

241. A situation when environmental requirements are not included in bidding documents and contracts may lead to improper implementation of EMP and low capacity and responsibility of Contractor in the field of environmental performance.

242. In accordance with national environmental regulations, three national Preliminary Environmental Impact Statements (PEIS) were prepared in November 2021. Environmental Appraisals (Environmental Permission) were obtained in March 2022 (Appendix **1.** The Environmental Appraisal of State Environmental Expertise: Preliminary Environmental Impact Statement (PEIS)).

243. Prior to civil works commissioning, Positive Conclusions on SEC from SCEEP must be received. The SEC will include information on permitted water discharge, air emissions and waste generation during the operation.

244. Procurement of goods, equipment and machinery which does not comply with ADB Prohibited Investment Activities List set forth at Appendix 5 of ADB SPS and national standards on exhausted gases will not be allowed.

245. Earth works without agreement with local utility company may cause emergency during digging trenches. Therefore, it will be important to get non-objections from all relevant municipal agencies.

246. Prior to commissioning of the civil works, Contractors will have to develop SSEMP including Topic Specific EMPs (TSEMPs) as defined in the following chapters. Proposing list of TSEMPs are presented below:

- Traffic Management Plan (TMP);
- Asbestos-Containing Materials Management Plan (ACMMP); [49]
- Wastes Management Plan;
- Spoil Management Plan;
- Spill Response Plan;
- Construction Camp Management Plan (CCMP);
- Occupational Health and Safety Plan (OHSP);
- COVID-19 Health and Safety Management Plan and emergency response plan.

247. The following measures will be taken to mitigate impacts identified at the pre-construction stage.

Mitigation measures

- PIU with the assistance of PMSC will ensure inclusion of environmental provision along with EMP in the bidding documents and in contracts for Contractors;
- Bids' evaluation needs to be done with consideration of capacity of bidders to meet EMP requirements, proposing adequate budget efficient for EMP implementation, existence of good practice in environmental performance within other similar projects;
- Prior to commencing any physical works, SSEMPs including TSEMPs will be developed by the Contractors under the guidance of the PMSC, and be endorsed by PMSC before submission to PIU for approval;

[49] ADB's Good Practice Guidance for the Management and Control of Asbestos: Protecting Workplaces and Communities from Asbestos Exposure Risks (Mar 2022) <Good Practice Guidance for the Management and Control of Asbestos: Protecting Workplaces and Communities from Asbestos Exposure Risks | Asian Development Bank (adb.org)> will also be referred when the ACMMP is prepared.

- TSEMPs mentioned above will be prepared by Contractors as part of the SSEMPs, endorsed by PMSC and approved by PIU for the following activities:
    - Traffic Management Plan;
    - Asbestos-Containing Materials Management Plan (ACMMP);
    - Wastes Management Plan;
    - Spoil Management Plan;
    - Spill Response Plan;
    - Construction Camp Management Plan (CCMP);
    - Occupational Health and Safety Plan (OHSP);
    - COVID-19 Health and Safety Management Plan and emergency response plan.
- Prior to civil works, the Contractor will get non-objection from all utility agencies such as gas supply, telecommunications etc.
- Goods procured for project implementation will be done in compliance with ADB Prohibited Investment Activities List set forth at Appendix 5 of ADB SPS;
- Environmental specifications will be included in bidding packages for procurement of machinery under the project. Particularly, toxic level of machinery will meet "Euro 3" environmental requirements as defined by national regulations[50];
- If there are any unanticipated impacts, the IEE/EMP will be updated to account for any additional or new environmental impacts and relevant corrective actions;
- Prior to commencement of civil works which have a risk to affect or cause to cut the trees, receive permission on cutting trees from SCEEP as it is indicated in RCM #43 (2019);
- Update LARP (if necessary) and pay compensations prior to cutting trees;
- Prior to commencement of construction works PMSC will conduct vision observation of demolishing buildings on presence of asbestos materials;
- In case of presence of asbestos materials, the Contractor will develop ACMMP that includes identification of hazards, the use of proper safety gear and disposal methods. (Sample ACMMP is provided in Appendix **3.** Sample of Asbestos-Containing Materials Management Plan). Any activities involving asbestos materials will be prohibited until the ACMMP is approved by the PIU and the PMSC.

2. Construction stage

a) Physical resources

(1) Impact on *air quality*

Construction/Rehabilitation of main pipeline

248. Construction of main pipeline will go through mainly not densely populated area along the highway A-370 and cultivated lands (agricultural fields and orchards) (**Figure 50** and **Figure 51**). In two places the pipeline crosses the highway (**Figure 52**).

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

Figure 52 and 53: The main pipeline goes along the agricultural lands (May 2021)

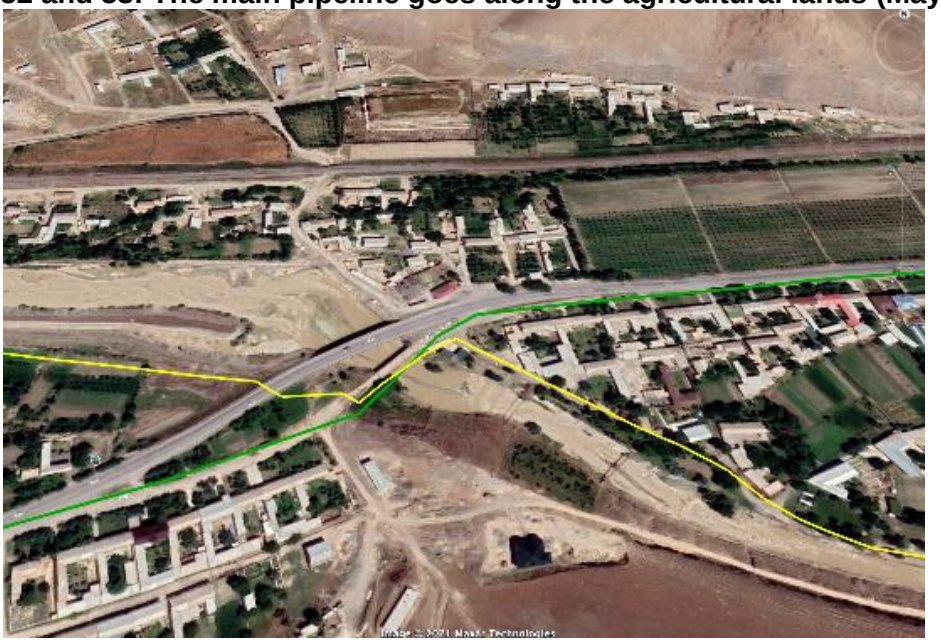


Figure 54: Crossing highway

249. During construction stage pollutants emissions (SO_2, NO_x, Co and dust) will be generated due to earth works, construction/demolishing activities and movement of vehicles. It is expected that dust pollution will occur more frequently. Risk of dust pollution will increase during the windy weather and movements of trucks with high speed inside settlements.

250. Dust will be generated during the demolishing of secondary/auxiliary buildings during the transportation of wastes. It is anticipated that demolishing of building will be required only for construction of the main pipeline.

251. 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.

252. Therefore, the impact is considered as moderate and could be minimized via implementation of the mitigation measures indicated in the next sections.

Construction and rehabilitation of water supply/sewage networks inside city

253. Inside settlements dust will be generated during the construction/rehabilitation of water supply and construction of sewage networks - digging trenches, movement of vehicles and transportation of bulk construction materials. Especially this risk will increase during the works inside city in the project mahallas and close to the sensitive receptors. There are number of sensitive receptors in three mahallas: 6 schools, 4 hospital and 2 kindergartens. Therefore, the impact will be major and will require implementation of mitigation measures.

Figure 55: Typical view of street with private houses (Ittifoq mahalla) (May 2021)

254. Along with, this, continuous monitoring of air quality will have to be conducted at all sensitive receptors to evaluated effectiveness of mitigation measures and applying additional measures in case of non-compliances. Location of monitoring points are indicated in the **Figure 56**.

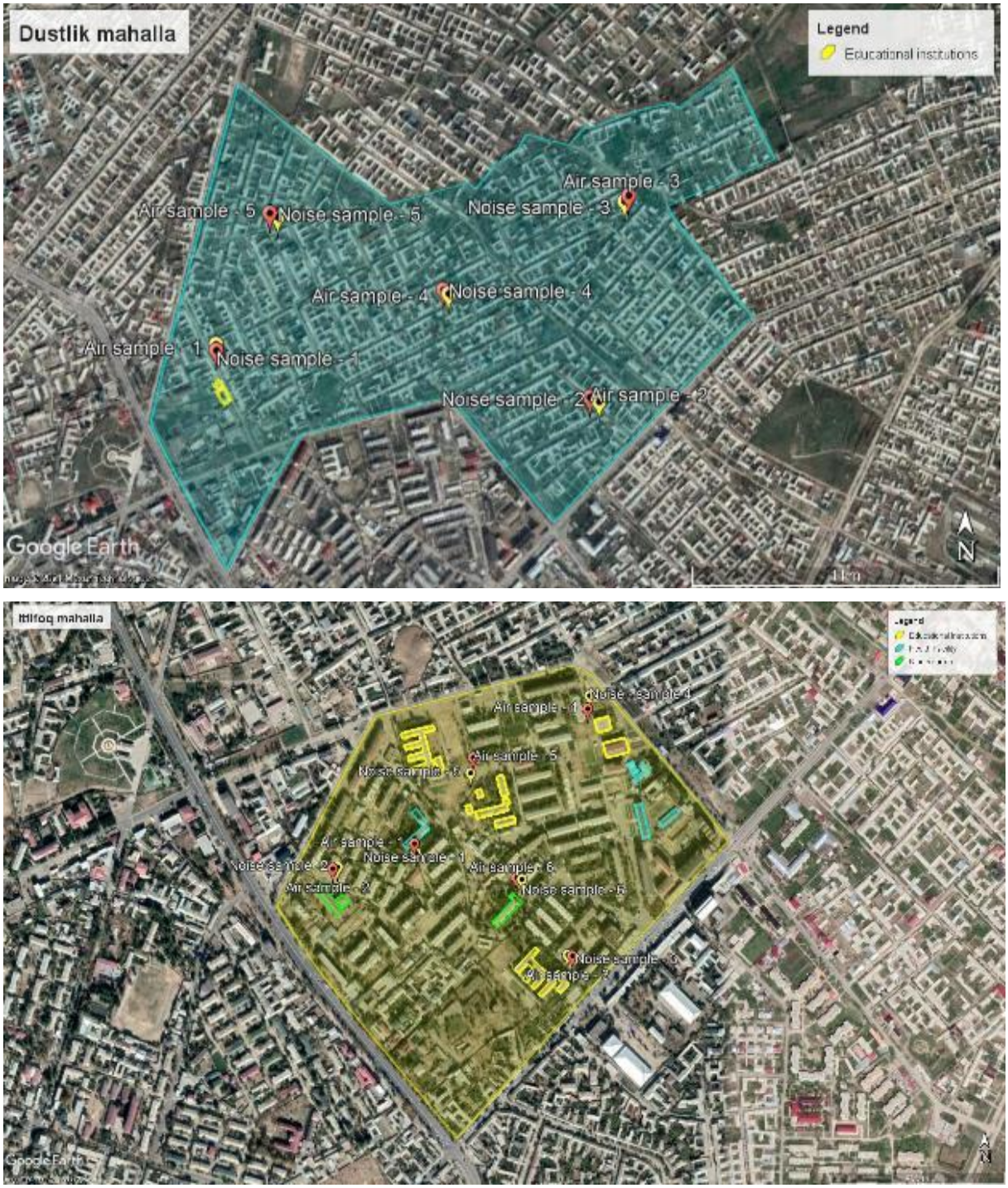


Figure 56: Monitoring points in Dustlik, Ittifoq and Yoshlik mahallas

255. At the stage of IEE preparation, baseline measurement of air quality has been conducted next to each sensitive receptor in July 2021. Results of baseline measurements are presented in **Table 28.** According to measurements concentration of pollutants did not exceed the national standards and international standards.

Table 28: Results of baseline air quality measurements in mahallas, mg/m^3 (July 2021)

#	Location	NO_x	SO_2	CO	Dust
Ittifoq mahalla					
1	Kindergarten #36	Abs[51].	Abs.	Abs.	0.11
2	Neurological Hospital	Abs.	Abs.	Abs.	0.13
3	School #17	Abs.	Abs.	Abs.	0.2
4	Specialized Art School	Abs.	Abs.	0,015	0.22
5	Endocrinologic treatment center	Abs.	Abs.	0.02	0.24
6	Kindergarten #9	Abs.	Abs.	Abs.	0.12
7	Children's Sports School	Abs.	Abs.	0,015	0.25
8	Family Clinic #4	Abs.	Abs.	0,02	0.2
9	School #7	Abs.	Abs.	Abs.	0.11
Yoshlik mahalla					
1	Kindergarten #32	Abs.	Abs.	Abs.	0.1
2	Institute of Obstetrics and Gynecology 1	Abs.	Abs.	Abs.	0.14
3	Institute of Obstetrics and Gynecology 2	Abs.	Abs.	Abs.	0.18
Dustlik mahalla					
1	Sugdiyona Street	Abs.	Abs.	Abs.	0.16
2	Nurlitepa Street	Abs.	Abs.	Abs.	0.18
3	Near Confectionery	Abs.	Abs.	0.13	0.22
4	Tongotar Street	Abs.	Abs.	Abs.	0.14
5	Ziyokor Street	Abs.	Abs.	Abs.	0.17
6	Ziyokor 1 A Street	Abs.	Abs.	0.12	0.19
	National Standard	**0.6**	**0.5**	**5.0**	**0.5**

[51] definition as Abs means that level of NOx in the atmosphere was below detective threshold of device which is 0.01 mg/m3

Mitigation measures:

256. During the construction period, regular mitigation measures will be used in 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 30 km/h;
- All vehicles and equipment will comply with technical requirements and will pass regular inspection as indicated in the national standards;[52]
- Restrict demolition activities during the period of the high winds or under more stable conditions when winds could direct dust towards adjacent houses; and
- Conduct regular monitoring of air quality in accordance with EMP (**Table 37**). In case of non-compliances with standards or grievance from the population, apply additional mitigation measures, such as more frequent watering.

Excavation, laying and traffic movements					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (weeks)	Local	Daily	Likely	Low
Receptor					**Sensitivity**
Residents along rehabilitated pipeline					Medium
Significance of Impact					
Minor					

Residual Impact

257. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

258. Cumulative impact may occur in project mahallas (Dustlik and Ittifoq) when construction of water supply network will be implemented in parallel with another sub-component: Urban Development Component in Djizzak city. In that case, amount of discharging air pollutants emissions could significantly increase.

259. To minimize this impact the following **mitigation measures** will be implemented:

- Plan project works in a way to make sure that timeline Urban development component implementation will not overlap with component on water supply and sanitation.

Excavation, laying and traffic movements					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (weeks)	Local	Daily	Possible	Low
Receptor					**Sensitivity**
Residents along rehabilitated pipeline					Medium
Significance of Impact					
Minor					

52 "O'z DSt 1057:2004 Vehicles. Safety requirements for technical conditions" and "O'z DSt 1058:2004 Vehicles. Technical inspection. Method of control".

(2) *Impact on Noise Level*

260. During construction works the following activities could generate noise:

a. Earth moving activity/digging trenches
b. Pipeline lying
c. Movement of vehicles used for material transport
d. Decommissioning
e. Roads repairing (if required)

261. To assess an anticipated noise level from these works, calculations were done based on existing information about operation of various equipment. During construction works, the following construction machinery will be used: auto cranes, bulldozers, excavators, asphalt roller and trucks. Noise generated by equipment on the distance of 15 m from these machineries' cabs is presented in the below table:

Table 29: Noise level from various machinery (at the distance 15 m)[53]

Noise source	Equivalent noise level, dBA
Excavator	81
Dozer (Bulldozer)	82
Auto (mobile) crane	83
Truck	88
Roller	76

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

262. Anticipated noise impacts during the various project activities are considered in the below sections.

Construction/Rehabilitation of main pipeline

263. During construction of the main pipeline, generated noise will not have a significant impact outside of the city. Most part of the transmission pipeline goes through the sparsely populated area and agricultural lands. There are no sensitive receptors along the main pipeline.

264. Noticeable increasing of noise level is anticipated during the demolishing of 4 secondary buildings. All demolishing buildings are located in the sparsely populated area as well. Anticipated noise impact will have a short-term character and will not have a significant impact. In general, noise from the construction of the main pipeline is considered as short term and minor. Nevertheless, implementation of the basic mitigation measures will be required.

Construction/Rehabilitation of water supply and sewage networks

265. Most of part of water supply and sewage networks are located inside of populated area with several sensitive receptors (schools, kindergartens, and hospitals/polyclinics) (**Figure 57**). Therefore, noise impact for these receptors will be significant. Although this impact will be short term, considering close location of houses and sensitive receptors (from 10 m until houses up to 500 m until schools and polyclinics).

[53] Part Two – Construction noise impact assessment, Table 9-Table 6.

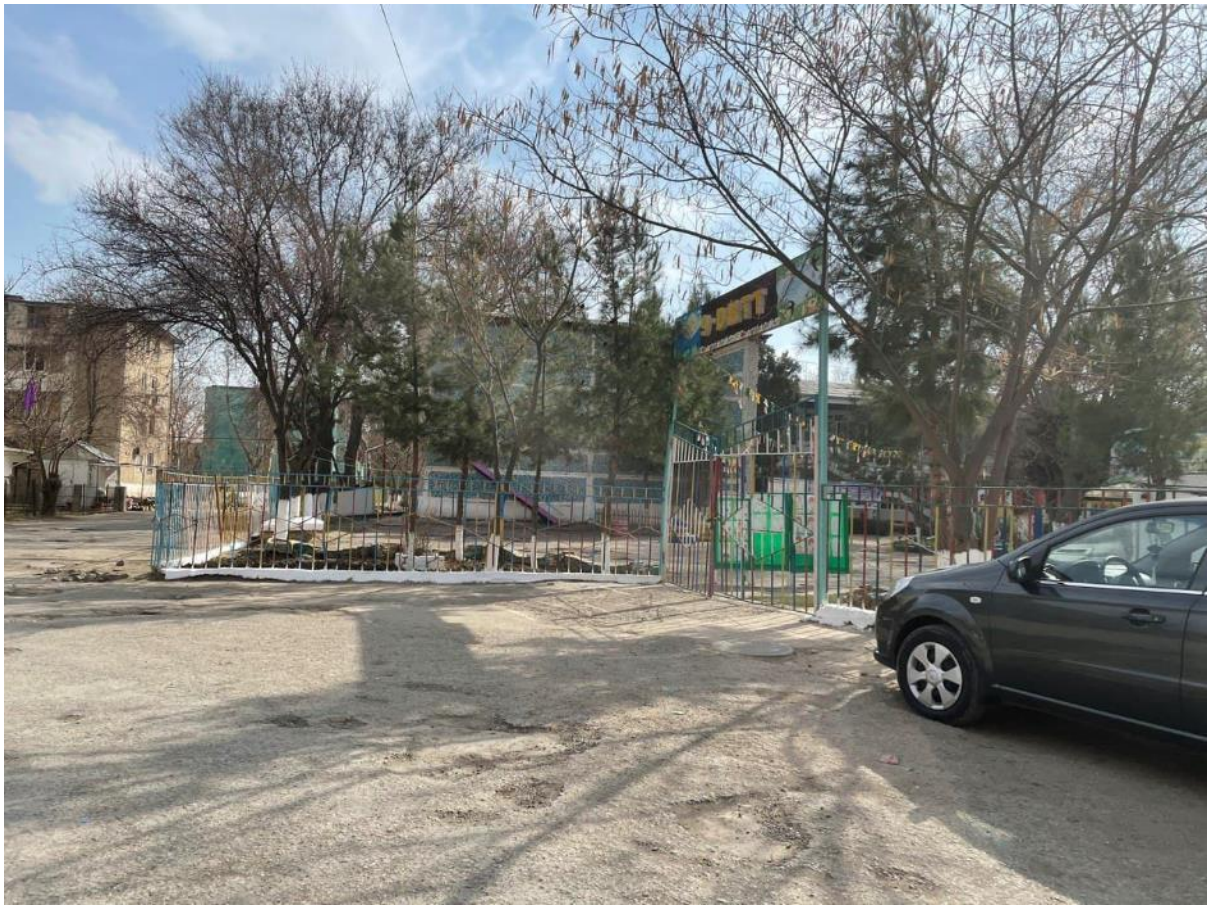


Figure 57: Close location of the kindergarten to houses (February 2021)

266. As usual, during construction of networks mainly bulldozers, auto (mobile) cranes, and excavators, are used. Using the Rules on Decibel Addition, the maximum noise level from construction equipment may reach 86 dB. **Table 30** provides results of a noise propagation exercise during the main works. The surface factor (area between construction site and living houses is mostly earth) will reduce noise at least by 2.5 dB. The Table provides noise level in the "first" level. Noise levels for receptors located behind any subject will be reduced by such "fences" as houses, other construction and trees.

Table 30: Noise propagation with distances (maximum and with consideration reduction factors)

Distance	Noise level-1 (maximum), dB	Noise level-2 (reduced due to surface factor)
15	89	72.8
20	87	70.3
65	77	60
80	75	58
120	71	55

267. Figures in Table 30 show level of noise without any barriers. Permitted noise level for educational entities and hospital is 55 dB.[54] According to the table, this level will be reached at the distance 120 m. Therefore, construction works in front of schools and hospitals will not be conducted during the working hours (8:30 – 15:00). In case of urgency or technical need of such works, additional mitigation measures (installation of acoustic screens) will be required.

[54] IFC General EHS Guidance, 1-7-1 (2007),

268. Implementation of more stringent measures will be essential during the construction in the populated part of the city.

269. The noise during demolishing and construction works will have adverse impact on workers working with on construction sites. To mitigate the impact occupational health and safety requirements will be applied by all workers. More detail information on occupational health and safety is provided in the Chapter V.B.2.d)(2).

270. Project workers will be exposed to noise from construction machinery as well as, potentially, hand-arm vibration from hand-held power tools, or whole-body vibrations from surfaces on which the worker stands or sits. Occupational Noise and Vibration will be managed through the development and implementation of Occupational Health and Safety Plan (OHSP), which will ensure compliance of the Project with EHS Guidelines (footnote 17) in relation to occupational health and safety noise and vibration. The Plan will therefore include provision for the active enforcement of the use of ear protection for prolonged exposure to noise levels greater than 85dB, as well as ACGIH[55] vibration limits, if appropriate.

Mitigation measures:

271. The following measures will be implemented to avoid noise impact on project sites located within settlements:

- Establish limits on speed for vehicles inside of settlements (30 km/h);
- In the settlement areas, construction works generating noise will be undertaken during period from 8:00 in the morning and until 8:00 in the evening;
- Avoid construction works in front of schools during the period from 8:30 until 15:00 during the weekdays and Saturday. Apply additional mitigation measures (installation of acoustic screens, mufflers for machinery, etc.) in case of urgency or technical needs of such works;
- Prepare and implement OHSP,
- Schedule construction to minimize the multiple use of noisier equipment near sensitive receptors (houses, schools);
- PMSC to conduct weekly monitoring of the noise level in the points indicated in **Figure 56** and **Table 28**. In case of exceeding standards (**Table 4**), apply additional measures (installation of acoustic screens);
- Use of PPE by workers involved in demolishing and construction works in conditions of increased noise level is mandatory;
- Inform population about anticipated works at least one week before.

Excavation, laying and traffic movements					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (weeks)	Local	Daily	Likely	Low
Receptor					**Sensitivity**
Residents along rehabilitated pipeline					Medium
Significance of Impact					
Minor					

272. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

273. Same as cumulative impact of V.B.2.a)(1) Impact on air quality.

[55] ACGIH Guide to Occupational Exposure Values, 2005

Excavation, laying and traffic movements					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (weeks)	Local	Daily	Possible	Low
Receptor					**Sensitivity**
Residents along rehabilitated pipeline					Medium
Significance of Impact					
Minor					

(3) *Impact on Vibration level*

274. Vibration impact during construction stage could be caused by the same machinery. Vibration level from different machinery was calculated in accordance with methodology provided in Transportation and Construction Vibration Guidance Manual (2013). Calculated values of vibration level are presented in **Table 31.** The table does not provide data on mobile and assembles cranes since vibration level is not significant.

Table 31: Calculation of vibration from equipment

Distance, m	Vibration from equipment,					
	Small bulldozer		Loaded trucks		Excavator	
	in PPV (in/sec)	dB	in PPV (in/sec)	dB	in PPV (in/sec)	dB
20	0.004	37	0.1	66	0.28	74
30	0.002	34	0.05	62	0.16	71
50	0.001	29	0.028	57	0.08	65

275. National standards for vibration level in residential houses are provided in Sanitarian Norms and Rules (SanN&R) № 0331-164 “Design of the living houses in climatic conditions of Uzbekistan”. For living houses the standards is 67 dB for nighttime and 72 dB for daytime with frequency in 37 and 61 Hz and for nighttime is 67 dB.

Table 32: National standards for vibration

Period	Permanent vibration, dB
Day time	72
Nighttime	67

276. As showed results of calculation of vibration level (**Table 31**), vibration from construction activities will not impact on people living on surrounded area and structures since it is below standard (72 dB for daytime).

Excavation, laying and traffic movements					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (weeks)	On-site	Weekly	Likely	Negligible
Receptor					**Sensitivity**
Residents along rehabilitated pipeline					Low
Significance of Impact					
Negligible					

Residual Impact

277. The residual impact is considered to be:

Negligible

Cumulative Impact

278. Same as cumulative impact of V.B.2.a)(1) Impact on air quality.

Excavation, laying and traffic movements					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (weeks)	Local	Daily	Possible	Low

Receptor	Sensitivity
Residents along rehabilitated pipeline	Medium
Significance of Impact	
Minor	

(4) Impact *on water resources*

Construction of main pipeline

279. 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 equipment without proper maintenance.

280. According to PEIS, total water consumption and generated domestic wastewater will be 0.5 m^3/day. A bio-toilet will be built on the territory of the construction site to collect domestic and fecal wastewater. As the effluent accumulates, it is transported to the nearest treatment facilities – Djizzak WWTP. The capacity of Djizzak WWTP is 30,000 m^3/day, which is sufficient to treat wastewater generated from construction camps and construction sites. The Contractor will conclude the agreement with local agency responsible for the collection wastewater from the toilets and its disposal.

281. The rehabilitated main pipeline will cross Sangzar river in only in two points. Certain some part of the main pipeline will go along the river. There are not any water streams inside project mahalla.

282. Mitigation measures to be applied to prevent contamination of Sangzar river during construction phase are presented below.

Main pipeline along the Sangzar river

Main pipeline crossing river

Figure 58: Water course in the project area

<u>Mitigation measures:</u>

283. The following mitigation measures will be implemented to minimize impact on water resources:

- Construction camp (if any) will be located on the territory of the Sangzar water intake. It will be strictly prohibited to conduct any repairing works of machinery on the territory of water intake;
- Construction camp will have to be located at a safe distance from water courses (no closer than 100 m);
- Management and storage of fuel, waste oil, hazardous waste will be planned in accordance with EHS General Guidelines on Hazardous Materials Management. This includes the use of appropriate secondary containment structures capable of containing the larger of 110 % of the largest tank or 25% of the combined tank volumes in areas with above-ground tanks with a total storage volume equal or greater than 1,000 liters;

- Spill cleanup equipment will be maintained on-site. Should any accidental spills occur, the immediate cleanup will be undertaken, and all cleanup materials will be stored in a secure area for further disposal. Disposal of such will be undertaken by a waste management company contracted by the Contractors. The waste management company must have the required licenses to transport and dispose any hazardous waste before any such waste is removed from the site. The Contractors will keep copies of the company's licenses and provide waste transfer manifests at their camp site for routine inspection by the engineer.
- Fueling operations and equipment maintenance will occur only within special designated containment areas bounded and provided with impermeable lining to contain spillage and prevent soil and water contamination. The area will be equipped with a drainage system which will be connected to wastewater treatment system including oil separator. Prohibit conduct this works in the area within 50 m from water streams;
- A bio-toilet will be built on the territory of the construction site to collect domestic and fecal wastewater. As the effluent accumulates, it is transported to the nearest treatment facilities – Djizzak WWTP. The Contractor will conclude the agreement with local agency responsible for the collection wastewater from the toilets and its disposal.
- Labor camps and construction sites will be equipped with sanitary latrines that do not pollute surface waters. Domestic wastewater from labor camps and construction sites will be canalized into septic tanks which will be installed by the contractors. The septic tanks will be timely emptied by hired septic trucks and transported to Djizzak WWTP.
- Keep copies of the transportation company's licenses and provide waste transfer manifests at its camp site for routine inspection by the engineer.
- No wastewater will be dumped into any ditches or streams.
- Construction wastewater arising on the site will be collected, removed from the site via a suitable and properly designed temporary drainage system and disposed of at a location and in a way that will cause neither pollution nor nuisance
- For the works implemented remotely from the construction camps, Contractor will use bio toilets. The Contractor will conclude the agreement with local agency responsible for the collection wastewater from the toilets and its disposal;
- Topsoil stripped material will not be stored where natural drainage will be disrupted;
- Ensure presence on the construction site spoil collection kits.

Construction activities, maintenance of Construction camps					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (weeks)	Local	Daily	Possible	Low
Receptor					**Sensitivity**
Sangzar river					Medium
Significance of Impact					
Minor					

(5) Ground *water*

284. Groundwater water table is located on the depth from 50 to 150 m within the project area. The project works does not consider any works on wells. Water meters will be installed on the connection on connecting pipes.

285. Pollution of ground water may occur during the replacement of pumps installed at the wells if protocol on replacement pumps will not be followed.

286. However, location of the construction camp on the territory of the ground water intakes (Sangzar, Amir Temur or any other) potentially will increase pollution of ground water which is used for drinking purposes.

287. To avoid this impact, the following mitigation measures are required:

- Avoid location of construction camps within territory of ground water intake or buffer zone (30m) along staying wells which are used for drinking purposes;
- During replacement of pumps on wells strictly follow the protocol described in KMK 2.04.02-97[56]

Construction camp performance					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (months)	Local	Daily	Unlikely	Low
Receptor					**Sensitivity**
Ground water deposits, residents of the project area					High
Significance of Impact					
Moderate					

Residual Impact

288. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

289. There are no other activities be conducted on the project site which may lead to pollution of ground water. Therefore, Cumulative impact is considering as:

Negligible

(6)* Impact *on soil

Reconstruction and construction of water supply network

290. 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 trench and be compacted. A Spoil Management Plan will also be prepared as part of SSEMP and properly implemented.

291. 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 used carriers will negatively impact on soil.

Mitigation measures:

292. To minimize this impact on soil quality the following measures will be implemented:

- The topsoil of about 30 cm depth will be removed and stored separately during excavation work, and after the construction of the main trunk pipes the same soil will be placed on the top, in unpaved areas;
- To minimize soil compaction, movement of all vehicles will be allowed only through identified access roads;

[56] The protocol defines a procedure of pumps replacement which avoids pollution of ground water.

- Install protection screens/nets along the river in the points crossing the river, to prevent collapsing of excavated soil into the river
- Contractors will be required to use only authorized carriers with getting all necessary permissions per respective national legislation;
- Contractor will prepare Spoil Management Plan as part of SSEMP and will ensure tis properly implementation.

293. Soil pollution may occur due to improper storage, handling and disposal of oil, fuel and hazardous materials. Impacts description and required mitigation measures are provided in the next chapter.

Excavation works, pipe laying and traffic movements					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (weeks)	Local	Daily	Possible	Low
Receptor					**Sensitivity**
Soil within the project sites					Medium
Significance of Impact					
Minor					

Residual Impact

294. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

295. Similar activities which may impact on soil quality is not anticipated in the project area, therefore cumulative impact is considered to be as:

Negligible

(7) Waste management

296. During construction of the main pipeline and water supply and sewage networks, both municipal/general waste from the site offices, construction camps, and possibly hazardous wastes from the items of machinery on site will be generated.

(a) Hazardous construction wastes

Construction of the main pipeline, water supply, and sewage networks

297. During construction phase, the following hazardous wastes will be generated from vehicle operation and maintenance: engine, hydraulic and transmission oils along with oil filters and absorbents. In case of improper handling and dispose of such materials, pollution of soil, ground and surface water may occur. Along with this, such materials are hazardous to human health.

Mitigation measures:

- A Waste Management Plan needs to be developed by Contractor, endorsed by PMSC and approved by PIU for the construction sites with demolishing works. The Plan will include information about type of generating wastes, amount, procedure of their collection and disposal. The plan also will include information about responsible person, training, action plan for emergency;
- Develop and implement spill response plan;
- Refueling vehicles and replacement oils also will be conducted in special designated and properly equipped places. Emergency facilities will be at the place for elimination of accident of oil spills;

- Used oil from vehicles and machinery will be collected into containers placed at the concreted sites and disposed to national oil company designated for accepting and treatment of used oils;
- Used batteries will be collected separately and transferred to the local branches "Cvetmet"[57] for further disposal.

Construction machinery maintenance, demolishing of structures					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (months)	Local	Weekly	Possible	Low
Receptor					**Sensitivity**
Soil, surface and ground water within the project sites					Medium
Significance of Impact					
Minor					

Residual Impact

298. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

299. Similar activities which may impact on soil quality is not anticipated in the project area, therefore cumulative impact is considered to be as:

Negligible

(b) Asbestos containing materials waste

300. The project will involve demolishing of existing building along the main water pipe some of which may have roofs containing asbestos materials (in roofing slate). The rehabilitated main pipeline and network do not contain asbestos pipes excavation of which may have hazardous for people. National regulation requires that asbestos wastes be disposed on the municipal landfills in compliance with requirements of SanR&N 0158-04 "Collection, transportation and disposal of asbestos contained materials in condition of Uzbekistan". Therefore, asbestos wastes will be disposed on Djizzak landfill in accordance with SanR&N.

Mitigation measures:

- Prior to commencement of construction works, PMSC will conduct visual observation of demolishing buildings on presence of asbestos materials.
- In case of presence of asbestos materials, the Contractor will develop Asbestos-Containing Materials Management Plan (ACMMP) that includes identification of hazards, the use of proper safety gear and disposal methods. (Sample ACMMP is provided in Appendix **3.** Sample of Asbestos-Containing Materials Management Plan).
- Any activities involving asbestos materials will be prohibited until the ACMMP is approved by PMSC and the PIU;
- Conduct all works on demolishing in accordance with approved ACMMP[58];
- Conduct awareness program on safety during the construction work.

Construction machinery maintenance, demolishing of structures					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Short-term	Local	Monthly	Unlikely	Low

[57] Local entity responsible for collection and treatment non-ferrous metals.
[58] Template of provided ACMMP covers requirements of SanPiN 0158-04.

Receptor	Sensitivity
Contractor's workers and residents of houses which constructions are demolishing	High
Significance of Impact	
Moderate	

Residual Impact

301. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

302. Cumulative impact is considered to be as:

Negligible

(c) Non-hazardous wastes

Municipal wastes

303. Municipal solid wastes and wastewater will be generated at the construction and camp sites. Mainly this is rubbish, plastic or glass bottles, glasses, waste food, 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 conflict with local population.

304. In some areas, rehabilitation of the main pipeline and water supply network will request excavation of existing pipes and their replacement with new ones. According to data provided by the local water supply agency (Djizzak Suvtaminot LLC), all existing pipes are made from steel. Therefore, after their excavation, they will be transferred to the operation entity Djizzak Suvtaminot LLC for their reuse or selling to the local company Vtorchermet [59] for further disposal.

Construction wastes

305. Construction wastes will be generated during demolishing of existing buildings for construction of the main pipeline. The construction wastes may consist of broken bricks, glasses, and used woods. Besides these wastes, used welding rods, packing materials, woods will be generated as well.

Scrap materials

306. In some areas, old, rehabilitated pipe iron pipes etc. will be handed over to Djizzak Suvtaminot LLC for further use or disposal. Other demolishing metal construction will be sold to the respective disposal company – Vtorchermet.

Mitigation measures:

307. The followings will be implemented for proper non-hazardous waste management:

- Conclude contract with waste disposal organization for the timely transportation and disposal of non-recyclable wastes, prior to the commencement of any civil works;
- Put proper waste bins at a related areas of construction sites and workers camps;
- 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 municipal landfill.

[59] National company responsible for collection and processing ferrous metals.

- Providing bio toilets for workers at the construction sites and timely disposal of wastewater to the Djizzak WWTP;
- Undertake the construction work stretch-wise; excavation, pipe laying and trench refilling should be completed within no longer than five days;
- Waste disposal will be done in accordance with agreement concluded between Contractor and waste disposal organization in timely manner (no more than 3 days) only on official landfills;
- Burning of waste on any construction site is forbidden.

Construction camp performance					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (months)	Local	Daily	Unlikely	Low
Receptor					**Sensitivity**
Ground water deposits, residents of the project area					Medium
Significance of Impact					
Minor					

Residual Impact

308. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

309. Similar activities which may impact on soil quality is not anticipated in the project area, therefore cumulative impact is considered to be as:

Negligible

b) Biological resources

(1) Impacts on flora

Construction of the main pipeline

310. Construction of the main pipeline mainly will go through outskirts of Djizzak city. The area is mainly occupied by dwellings and small agricultural plots. Significant part of the main pipeline goes along the railway track. The flora of area on that part of the pipeline alignment is represented mainly by the fruit trees, vegetables and some grasses. As per discussion with representatives of Djizzak branch of SCEEP there are no species included in the national Red Book and IUCN Red List.

311. Nevertheless, unnecessary cutting trees, or usage trees as fuel, clearing of sites from vegetation, improper selection of a location of construction and labor (if any) camps and their maintenance may adversely impact on these plants.

Camelthorn plant (Alhági)

Handelia trichophylla

Tamarix

Medicágo

Elaeagnus angustifolia

Fruit trees (cheery and apple)

Figure 59: Vegetation on the territory of project pipeline (May 2021)

Reconstruction and construction of water supply and sewage network

312. Some impact may occur during water supply and sewage network construction and reconstruction. Construction works on pipe laying will be conducted along existing roads. There is possibility that some bushes will be cut. However, cutting trees is not anticipated. In case of necessity of cutting trees during such kind of works, the Contractor will have to get permission from the SCEEP and pay compensation in accordance with national legislation.

Mitigation measures:

313. To mitigate adverse impact on vegetation and wildlife and to comply with national requirements the following measures are required:

- During the DED, select an alignment of pipeline in a way which allows to minimize cutting of trees and bushes;
- Prior to starting civil works, all trees which will be cut will be marked to avoid unnecessary cutting trees;
- Conduct joint revision of the project sites with representatives of inspectors from relevant district branches of SCEEP to identify number of cutting bushes and trees if any and to receive permission from SCEEP and Djizzak city Khokimyat (for trees cut inside city) and Djizzak province Khokimiyat for (for trees outside of the city) on cutting trees as it is indicated in Resolution of Cabinet of Ministries of RUz #43 dated 17 January 2019;
- Do not use chemical and burning for removing vegetation.

Construction of main pipeline, construction and reconstruction of water supply and sewage network					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (months)	Local	One time	Likely	Low
Receptor					**Sensitivity**
Flora of the project site					Medium
Significance of Impact					
Minor					

Residual Impact

314. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

315. Cumulative impact is considered to be as:

Negligible

(2) Impacts on* land *use

316. Impacts on land use was accessed based on LARP materials prepared for this project. The feasibility study attempted to minimize the land acquisition and involuntary resettlement. The project is expected to have temporary impacts and no permanent impacts, as no land acquisition will be required.

Reconstruction and construction of the main pipeline, water supply and sewage networks

317. The construction and reconstruction of water supply and wastewater networks will not have any significant impact. Most of the impacts will be possible to be avoided during construction by the Contractor. The exact line routes for these small diameter wastewater pipelines are not yet final and these have various flexibility during laying of the line where

adverse impacts can be avoided. During the survey, no impact was identified due to construction of wastewater networks. Anyway, some additional provision (15%) will be made in the resettlement budget to cover any unanticipated impacts during the project implementation.

318. According to data provided by the resettlement team, there will be no or minimal LAR impact. However, to secure a LAR budget for any minor impact for the 23.05 km, and 5.21 km, it is suggested to estimate approximate LAR costs for all 35.45 km by multiplying the LAR costs identified for 12.4km where we have conducted affected households' surveys. Physical displacement is not anticipated for this project.

319. The time for implementation of the LARP will be scheduled as per the overall project implementation schedule. All activities related to the addressing of the temporary impacts must be planned to ensure that compensation is paid prior to the commencement of civil works. Public consultation, monitoring and grievance redress will be undertaken continually throughout the project duration. Monitoring will be the responsibility of the Djizzak Suvtaminot LLC. The implementation of LARP will be closely monitored by PIU and PMSC social safeguards specialists.

320. The Project is expected to have only temporary impacts on land in terms of loss of crops, trees, etc. A summary of impacts is shown in **Table 33**.

Table 33: Summary Impacts

#	Impacts	Permanent Impact	Temporary Impact	TOTAL
1	Affected land area (ha)	0	2.26	2.26
2	Affected land users/households (#)	0	4	4
3	Affected households' members (#)	0	14	14
5	Arable/crop cultivation land area (ha)	0	1.64	1.64
6	Orchard/garden land area (ha)	0	0.62	0.62
7	Severely affected households (#)	0	0	0
8	Total number of trees, including	4476		4476
8.1	Fruit trees	1708	0	170
8.2	Non-fruit trees	2768	0	40

Source: IOL and Census Survey, February-June 2021

Construction of main pipeline, construction and reconstruction of water supply and sewage network					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (months)	Local	One time	Likely	Low
Receptor					**Sensitivity**
Land users and trees owners					Medium
Significance of Impact					
Minor					

Residual Impact

321. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

322. Similar activities which may impact on soil quality is not anticipated in the project area, therefore cumulative impact is considered to be as:

Negligible

c) Socio-economic resources

Construction of the main pipeline

323. Construction works will have positive effect and may have negative impacts on socio-economic resources.

324. Personnel with different qualifications will be required for construction works, and local population could be hired for some of activities, which means creation of new jobs. Moreover, indirect services could be needed to provide needs for housing (probably), catering and other types of services. These economic benefits for population will contribute to overall project positive impact.

325. Construction of the main trunk will pass through some orchards and vegetable garden (**Figure 60** and **Figure 61**). The impact related to construction of pipelines is temporary in terms of losses of standing crops if unavoidable. Cutting trees may also lead to loss of people incomes.

Figure 60: Orchards on the way of new alignment

Figure 61: Vegetable Garden (May 2021)

Construction of the water supply and sewage network

326. Construction of water supply and sewage networks will be implemented inside of Djizzak city in populated area. Therefore, access to some commercial facilities (shops, service centers) will be limited during construction works. It may cause decreasing of population income. Contractor will have to undertake mitigation measures to minimize duration of this impact. As alternative small temporary bridges will be constructed for continuous work of such facilitates.

327. Besides economic impact, civil works may create some risks related to safety of population. These risks are described in the following paras. The impact related to disturbance of population caused by noise from construction and mitigation measures are presented in Chapter V.B.2.a)(2).

328. Increasing of traffic intensity is also anticipated, including heavy machinery. Besides nuisance for population, it may have risks for population related to the road accidents. More detailed description on this impact and proposed mitigation measures are provided in Chapter V.B.2.d)(1).

329. For identified socio-economic impact, the following mitigation measures will be implemented:

Mitigation measures

330. The following measures will be undertaken to minimize or compensate this impact:

- Construction during agricultural off- season will minimize the impact (loss of agricultural income). Major crops in the project area that could be affected are sunflower, rice, and vegetables which growing seasonally;
- If cutting trees is unavoidable, to compensate losses as indicated in the LARP for this project and in cost for trees.
- Hire local population with suitable qualifications for works to the extent possible;
- Prepare a work plan of construction works in a way allowing to minimize impact on economical income of commercial facilities. If works in front of commercial facilities will be conducted for longer than 3 days, install temporary bridges;
- Inform population in advance about planning works.

Construction camp performance					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (months)	Local	Daily	Likely	Low
Receptor					**Sensitivity**
Local population					Medium
Significance of Impact					
Minor					

Residual Impact

331. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

332. Cumulative impact is considered to be as:

Negligible

d) Occupational and Community Health and Safety Issues

333. Besides impacts on air, water and soil quality, described in previous chapters, certain risks may take place related to occupational and community health and safety.

(1) Community Health and Safety

Construction of the main pipeline and water supply and sewage network

334. Inadequate lighting and fencing of construction sites inside of settlement areas can be dangerous for pedestrians and vehicles especially during the nighttime. Increasing of traffic due to trucks and vehicles movements to construction sites, temporary closing of roads during pipe lying inside of settlements may cause inconvenience for local population as well. In addition, pipe-lying will cause temporary blockage of household access.

335. Untimely and inefficient disposal of solid waste and improper sanitary conditions generated by the construction workers at construction sites may cause pollution of the surrounding environment and affect the health of local people.

336. During the construction phase, the traffic will have the potential impact to the local community safety, workforce safety and traffic flow in the project sites.

337. There could also 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.

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

339. Moreover, a movement of heavy tracks may destroy or deteriorate conditions of roads inside settlements.

Mitigation measures

340. The following measures will be undertaken to minimize these impacts:

- Contractor will inform population about anticipated works in the settlement in advance. Prior to starting construction works, Contractors will share work plan with indications timeline and places. The works will be planned in the way, ensuring that trenches will not stay open more than 5 days;
- Contractors will require to develop a TMP as part of the SSEMPs 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. Agreement on the TMP will be obtained from Traffic Police. The TMP will be disclosed to local community prior to 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.
- Install temporary bridges and effectively organize works, which will allow avoid unreasonable delaying of construction works;
- Install safe temporary bridges across ditches for residents living in areas close to construction sites to minimize potential of falls due to the need to use alternative passages;
- All construction sites (especially inside settlements) must be properly lightened and fenced;
- After completion of construction works, all roads will be rehabilitated at least up to condition of pre-construction stage;
- Carry out regular awareness campaigns among work staff, including specific hazards associated with the spread of HIV/AIDS.
- Contractor will develop a Construction Camps Management Plan;
- After completion of the main construction, Contractor will provide full reinstatement of the construction and camp sites by bringing them to its primary condition;
- Remove all rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required;
- All hardened surfaces within the construction camp area will be ripped, all imported materials removed; and
- PMSC will conduct post-construction audit during defect liability period to make sure that construction sites and camps are properly cleaned and restored to pre-project conditions before acceptance of works before hand-over to Djizzak Suvtaminot LLC.

Construction camp performance					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (months)	Local	Daily	Likely	Moderate

Receptor	Sensitivity
Local population	Medium
Significance of Impact	
Moderate	

Residual Impact

341. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

342. Similar activities which may impact on community health and safety is not anticipated in the project area, therefore cumulative impact is considered to be as:

Negligible

(2) Occupational Health and Safety

343. Construction Camps Management Plan (CCMP) will be developed by Contractors as part of the SSEMP, endorsed by PMSC and approved by PIU prior to commencement of works. CCMP will describe waste collection and disposal procedure, set up of camp facilities (such as a storage place for construction materials and equipment if any, laundry and toilets, access roads) in the way, which will allow to minimize disturbance of local population. Washing equipment and vehicle will be prohibited on the territory of the construction camp. The washing will be done at the equipped place outside of labor/construction camp's site. At the same time, labor camps will provide safe and adequate living conditions for workers, such as dining rooms, toilets, shower rooms etc. In addition, the Contractors will instruct all the workers to act in a responsible manner.

344. After the completion of work at a particular site, Contractor will remove all equipment and structure, clean up and dispose all waste materials, rehabilitate all construction sites and work areas so that these can be returned as possible to their previous use.

345. The Contractors will be required to develop and to implement a project OHSP to establish measures to ensure project activities are carried out with minimal risk of injury or illness to workers for the duration of this project.

Mitigation measures

346. The following measures will be undertaken:

- Contractor will comply with requirements of Labor Code of Uzbekistan (1998) and standards on work and health safety;[60]
- Contractors will develop OHSP. PMSC will review and endorse and PIU will approve the plans;
- Contractors will ensure proper implementation of the above plans;
- Djizzak Suvtaminot LLC will coordinate works with local khokimiyats and Traffic Police.

Construction camp performance					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (months)	Local	Daily	Likely	Moderate
Receptor					**Sensitivity**
Contractor workers					Medium
Significance of Impact					
Moderate					

[60] Construction Norms and Rules # 3.01.01-03. Organization of Construction works. 2003.

Residual Impact

347. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

348. Similar activities which may impact on occupational health and safety of workers is not anticipated in the project area, therefore cumulative impact is considered to be as:

Negligible

(3) Impact assessment due to COVID-19

349. 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 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.

350. 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.

351. The Government of Uzbekistan 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 ASEW (3rd edition) on 11 May 2020. The SanN&R provides general requirements and specific requirements for different sectors: pharmacy, public transport, markets, construction sites etc.

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

- preventing spread of infection in the organization;
- taking measures to prevent the spread of 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.

353. Currently the Government of Uzbekistan widely introduces the vaccination of the population from COVID-19. In accordance with national regulation, the Employer has the right to refuse to hire a potential employee if he is not vaccinated. An exception may be medical contraindications. 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.

354. All managers will 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.

355. 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

- The Contractors will be required to (i) assess implications of the project-level COVID-19 related risks and impacts; (ii) identify necessary risk mitigation measures; and (iii) prepare a COVID-19 Health and Safety Management Plan and emergency response plan. The COVID-19 Health and Safety Management Plan should be aligned with any government regulations and guidelines on COVID-19 prevention and control, or in the absence thereof, with international good practice guidelines as may be updated from time to time. The COVID-19 Health and Safety Management Plan would be reviewed by the PMSC in consultation with public health inspectors of the area, local medical officers and other relevant health specialists, with a recommendation forwarded to the PIU for clearance. The status and adequacy of project's COVID-19 response would be fully documented in the Semi-Annual Environmental Monitoring Report (SAEMRs).
- If a suspected incidence of COVID-19 is reported of any member of the project team during implementation of the project-related activity (including consultation and public participation), the activity will stop immediately for a review of the adequacy of the safety system of work and a corrective action will be implemented to address any identified gaps in the safety system of work prior to recommencement of the activities. All such incidence will be reported to ADB immediately for review.
- In conditions of pandemic risk, organize works in accordance with regulatory documents indicated in Chapter V.B.2.d)(3) of the IEE;
- Ensure proper recording and reporting of any cases of infection and undertaken actions.

Construction camp performance					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (months)	Regional	Daily	Possible	Moderate
Receptor					**Sensitivity**
Contractor workers and local population					Medium
Significance of Impact					
Moderate					

Residual Impact

356. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

357. Same as cumulative impact of V.B.2.a)(1) Impact on air quality.

Excavation, laying and traffic movements					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (weeks)	Local	Daily	Possible	Low
Receptor					**Sensitivity**
Residents along rehabilitated pipeline					Medium
Significance of Impact					
Minor					

e) Cultural heritage

Reconstruction and construction of sewage network

358. The land and vegetation clearing, earthmoving activities during pipe lying works may affect the archaeological heritage in the project areas. During the IEE preparation and conducted consultation with local stakeholders, such as khokimyats, mahallas and desk study review, historical places were not defined within the project area. The pipe lying works will be implemented along the existing main roads or will be placed on the old pipes. Nevertheless, the Contractor will be required to follow relevant national regulations and proposed mitigation measures.

359. Therefore, Contractor should be aware mitigation measures which have to be undertaken which are 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 Appendix **5.** Chance finds procedure.

Mitigation measures

360. The following measures will be undertaken in case of possibility to chance of finding heritage:

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

Construction camp performance					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (months)	Local	Monthly	Unlikely	Low
Receptor					**Sensitivity**
Contractor workers and local population					Medium
Significance of Impact					
Minor					

Residual Impact

361. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

362. Similar activities which may impact on the cultural heritages in the project area is not anticipated in the project area, therefore cumulative impact is considered to be as:

Negligible

3. Operation stage

Maintenance of the main pipeline, water supply and sewage networks

a) Impact on the air

363. Impact on air quality and noise level during the project operation phase could be caused by rehabilitation works which could be required during the maintenance of damaged or leaking pipes. However, taking in account quality, methods and lifetime of the installed pipes, the probability of this impact is considered as negligible.

Excavation works and machinery work					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (days)	On-site	Yearly	Unlikely	Low
Receptor					**Sensitivity**
Contractor workers and local population					Low
Significance of Impact					
Negligible					

b) Impact on water resources

364. Potential impact on water resources could be caused by increased consumption of water due to continuous supply of water with population currently using water on intermittent base. Overuse of available ground water deposits may lead to depletion of water resources. To ensure availability of water resources, confirmation on form of Conclusion on extraction water was received from SCEEP on 25 February 2022 after approval from the Committee on Geology and Mineral Resources. The Conclusion from the SCEEP defines amount of water (maximum limits of water is 16,800 m^3/day for Amir Timur water intake and 38,900 m^3/day for Sangzar) which could be withdrawn from the ground water wells without harm to water deposits, depletion of ground water in downstream areas, land subsidence and other impacts. The Conclusion is presented in Appendix 2. Permission on water use during construction phase.

365. To avoid the negative impact on ground water deposits due to water withdraw, the following mitigation measures will be applied:

- Develop Statement on Environmental Consequences (SEC) and receive no objection from SCEEP;
- Ensure that withdrawing amount of water follows established limits (as indicated in Conclusion from the SCEEP - 16,800 m^3/day for Amir Timur water intake and 38,900 m^3/day for Sangzar) for each water intake;
- In case of necessity to increase water withdraw, receive permission in accordance with Resolution of Cabinet Ministries of RUz # 255 dated from 31 March 2018.

Excavation works and machinery work					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary (months)	Local	Yearly	Unlikely	Low
Receptor					**Sensitivity**
Groundwater deposits					Medium
Significance of Impact					
Minor					

Residual Impact

366. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

367. Similar activities which may impact on the water resources in the project area is not anticipated in the project area, therefore cumulative impact is considered to be as:

Negligible

368. Overall, the project will have significant positive impact on water resources due to installation of water meters, SCADA system and promotion program which will contribute to rational water use and water saving. Reconstructed pipeline and water supply networks will avoid leakages of water/non-revenue losses.

c) Waste management

(a) Non-hazardous waste

369. During operation of main pipeline and water supply and sewage network, generation of wastes is not anticipated. The lifetime of the iron pipeline is around 30 years and plastic pipes – more than 40 years. Some maintenance could be required for installed water meters; however, it will not lead to generation of the wastes. During operation of installed SCADA system, wastes will not be generated as well.

(b) Hazardous waste

370. Hazardous wastes will be generated during operation of ground water wells. Bactericidal lamps using for disinfection of the extracting water will have to be replaced once per two years. Improper handling and disposal of such lamps may lead to poisoning of operating personnel, other persons who will be in contact, and pollution of environment. The replacement of such lamps will require proper skills on handling and further disposal.

Mitigation measures

- Provide training on handling and disposal bactericidal lamps for Djizzak Suvtaminot LLC staff involved in the maintenance of the ground water wells;
- Ensure proper implementation of guidance on handling of bactericidal lamps by Djizzak Suvtaminot LLC staff;
- Conclude agreement on disposal used lamps with relevant agencies working on disposal of lamps.

Excavation works and machinery work					
Type	**Duration**	**Extent**	**Frequency**	**Likelihood**	**Magnitude**
Direct	Temporary	Local	Yearly	Unlikely	Low
Receptor					**Sensitivity**
Groundwater deposits					High
Significance of Impact					
Minor					

Residual Impact

371. Following implementation of mitigation measures described above, the residual impact is considered to be:

Negligible

Cumulative Impact

372. Similar activities which may impact on hazardous wastes management in the project area is not anticipated in the project area, therefore cumulative impact is considered to be as:

Negligible

d) Community Health and Safety

373. It is unlikely that maintenance of the main pipeline, water supply and sewage networks will create substantial risk for population. Some maintenance works could be required due to accidents and leakage. However, considering lifetime of the installed pipe, the probability of such accident is very low, and therefore, anticipated impact is negligible.

374. The project will have positive impact on community health. After completion the project works, population of Dustlik and Ittifoq mahallas will get 24/7 safe water, while now water is supplying several hours per day. It will have positive impact on hygienic conditions and population health. Installation of bactericidal lamps and replacing of deteriorated pipes with high rate of leakages will ensure supplying of drinking water which meets standards.

375. New handwashing and sanitation facilities in schools, kindergartens, health care facilities, markets, bus stations, and other public buildings in the project mahallas will contribute to prevention of COVID-19 and similar pandemic.

376. This will be supported by development of educational materials, hygiene awareness, and WASH+H programs which will be undertaken in Ittifoq, Dustlik, and Yoshlik mahallas in coordination with Sanitary-Epidemiological Welfare and Public Health Service (SEWPHS) and UNICEF. This will be done under this Project as part of awareness raising program by the Urban Governance & Institutional Strengthening Consultants.

4. Transboundary Impact

377. In accordance with IFC Guidance Note[61], transboundary impacts are impacts that extend to multiple counties, beyond the host country of the project, but are not global in nature.

378. In the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991), the notion of "transboundary impact" is defined as any impact, not exclusively of a global nature, within an area under the jurisdiction of a Party caused by a proposed activity the physical origin of which is situated wholly or in part within the area under the jurisdiction of another Party.

379. Within current IEE, it was accepted that transboundary impact is an impact that affects receptors, beyond the boundaries of the country in which the project is located and produces transboundary effects, including global effects.

380. Both ground water deposits (Sangzar and Amir Temur) and ground water wells inside Djizzak city is not located in area which could impact on other countries. The ground water deposits are not shared deposits used by other countries. Therefore, the project will not have transboundary impact during both phases – construction and implementation.

381. Thus, during the project operation stage some negative impacts and risks may take place. However, all of them could be mitigated by implementation of proposed measures described in EMP and required by national legislation. Detail information about impacts, recommended mitigation measures, responsible people for EMP implementation and monitoring with cost estimates for these activities are presented in Chapter IX.

5. Climate Change Impact

382. No climate impact is expected during the Project construction and operation phases. So, greenhouse gas emissions from the operation of equipment will be insignificant. Requirements for contractors included in the EMP for the use of at least Euro-3 class equipment, the limit for the operation of equipment at idle speed will minimize carbon dioxide emissions.

[61] International Finance Corporation's Guidance Notes: Performance Standards on Environmental and Social Sustainability, 2012.

383. As a result of the replacement of pumping equipment with new energy-efficient pumps, it is expected that during operation phase fuel consumption will decrease, and, accordingly, carbon dioxide emissions into the atmosphere will decrease as well.

384. According to the assessment of the impact of climate change on the project carried out by TRTA consultants, the following potential impacts were identified:

- Increase in the length of drought periods may lead to shortage of drinking water;
- Moderate increases in precipitation intensity and maximum 1-day precipitation events which may exceed urban water cycle capacity;
- Djizzak experiences cold winters with a historic minimum annual temperature of -13.9°C. Climate change will somewhat alleviate this. It may cause the situation when water pipes may be threatened by damage from freezing.

385. To be resilient to the Climate Change impacts, the TRTA consultant integrated the following requirement in the project technical specifications:

- Sewage network design is able to cope with the moderate increases in precipitation intensity and maximum 1-day precipitation events.
- materials selection and further design are able to cope with low winter temperatures.
- equipment purchased by IUDP will be energy efficient.

VI. ANALYSIS OF ALTERNATIVES

386. This project envisages the modernization of the water supply and sewerage system in the city. The work will mainly involve the replacement of existing pipes and construction of new ones, replacement of several pumps, installation of a water metering and disinfection systems. Due to the specifics of the project works, consideration of alternatives is limited to only three areas:

1) Selection of the route of the new part of the water conduit to minimize the impact on existing buildings, crops and trees.
2) The choice of meters for metering water in pipes, to select the most effective equipment for a given water pressure, climatic conditions and type of pipes.
3) The situation “without the project”, when high water losses persist, low level of safe drinking water supply to the population, high energy consumption for pumping water and its distribution through the network.

387. In the first direction, the DED Consultant (footnote 2) carried out a detailed study of the project area and made a topographic survey. Based on the results of studies, the optimal route of the new water conduit was selected.

388. In the second direction, water metering systems were selected that were most suitable in terms of the technical parameters of the communication systems available in the region and the parameters of pipes.

389. In the case of a "no project" situation, the water supply of Djizzak city will not be able to provide both the population and the production potential of the city safe drinking water. As a result, this will lead to an increase in social (deterioration of the sanitary and epidemiological situation, dissatisfaction of citizens with water supply services) and economic problems (limitations in the opening of new production and sustainability of existing ones).

VII. INFORMATION DISCLOSURE, CONSULTATION, AND PARTICIPATION

A. Consultation

390. One of the main goals of the IEE 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 regard, several consultations were held in the project provinces in August and November 2021 to capture the stakeholders' opinions about the project and agree on the project activities.

391. Prior to the public consultations, several meetings were conducted with internal and external stakeholders, such as representatives of the SCEEP in Tashkent, Djizzak branch of SCEEP, district khokimiyats and mahallas, ASEW and others.

392. Current IEE preparation period (March - October 2021) covered COVID-19 quarantine period and some quarantine restrictions are still in effect on the territory of the RUz. Therefore, consultation was conducted in condition of limited access to the population living on the project sites. Despite this, TRTA consultants were able to meet with a small number of people (2-3 persons) among the population in the project mahallas and briefly talk about the project.

393. To deliver information about the WSS subcomponents, its environmental impacts, GRM, TRTA consultants prepared leaflets in Russian and Uzbek languages with brief information on these topics (Appendix **7.** Leaflet distributed during the Public Consultation). The leaflets also provided information on type of mitigation measures and contacts for clarifications and grievance submission if any. The information in the leaflet was reviewed by MIFT and printed versions (100 copies) were distributed in settlements located in 3 project mahallas in Djizzak city (Ittifoq, Yoshlik and Dustlik) and in 4 other mahallas (Sangzar, Amir Temur, Bogishamol and Toshliqon), which rehabilitated main pipeline goes through: Sangzar-Amir Temur-Djizzak. In total, 100 leaflets were distributed among the citizens of the project area. Besides, the leaflets were also delivered to Djizzak city khokimiyat, schools and kindergarten in Djizzak city's mahallas, Djizzak city Uzsuvtaminot branch and in the one big mahalla public bus stop to cover a greater number of people which could be affected by the project.

394. Public Consultations were held on 14 October 2021 in 7 mahallas of Djizzak (Amir Temur, Bogishamol, Dustlik, Yoshlik, Ittifoq, Sangzor and Toshlihol) by PIU within the preparation of national PEIS (Appendix 8. Minutes of Public Consultations within **the** national EIS

395. Appendix 9. Record of public consultations (List of the participants and photos from meetings).

396. The main issues raised during the meetings with public are presented in **Table 34**. Further information of the public consultation is in **Appendix** 8. Minutes of Public **Consultations** within **the** national EIS

397. Appendix 9. Record of public consultations (List of the participants and photos from meetings) and Appendix **9.** Record of public consultations (List of the participants and photos from meetings).

Table 34: Questions and answers raised during the public consultation

Issues raised	Response
Djizzak city, 24 September 2021	
When will the project start?	According to plan the project will start in 2022
The project is very important for us and an area where we live.	Thank you. Well noted.
What activities are proposed under the WSS subcomponent in 3 mahallas?	Reconstruction and construction of distribution pipelines, including new and rehabilitation of existing household water connections.

Issues raised	Response
	Improvement of the sewerage system (reconstruction and construction of sewerage networks, and house connections) in the Dustlik mahalla. Installation of smart household meters for subscribers in Djizzak. Hygiene promotion program including advertising campaigns and installation of washbasins in schools, kindergartens and hospitals in 3 project mahallas.
Who is funding agency for the project? Is it grant?	The project will be funded through ADB loan. It is not grant.

398. Moreover, the leaflets in both languages – Russian and Uzbek were published on Uzsuvtaminot JSC's website (**Table 35**).

399. For better interaction with population in the project area, the Telegram canal was created by PIU. PIU specialists, provincial and city level khokimiyat experts, mahalla leader and all citizens willing to join were added to the group. Questions, suggestions and concerns received via Telegram canal will be considered in IEE and reflected accordingly. There are no any questions or opinions received by the time of the IEE completion.

B. Information Disclosure

400. As part of information disclosure, the summary of the final version of IEE, EMP and GRM will be translated into Uzbek language, full report will be translated into Russian and both documents will be published on MIFT-PIU website. The printed version of the final IEE report translated into Russian and Uzbek will be sent to the Djizzak branch of the SCEEP, and mahalla committee in Djizzak city (Ittifoq, Yoshlik and Dustlik), and 4 other mahallas (Sangzar, Amir Temur, Bogishamol and Toshliqon) along the main pipeline for further use during the construction and operation phases. For all interested parties, the IEE (in English and Russian, and summary in Uzbek) will be available at the offices of the PIU and Regional PIU and their websites. (**Table 35**)

Table 35: Method of Information Disclosure

Information	Language	Disclosure Method
Project Leaflet (Appendix 7)	Russian and Uzbek	- 100 copies distributed to the community - Uzsuvtaminot JSC's website: https://uzsuv.uz/uz/ifireports; https://disk.yandex.com/i/HK_1_Pzmn0NKQw - MIFT-PIU website: https://cutt.ly/2Pv5A1v - Leaflets were also delivered to Djizzak city khokimiyat, schools and kindergarten in Djizzak city's mahallas, Djizzak city Uzsuvtaminot branch and in the one big mahalla public bus stop to cover a greater number of people which could be affected by the project
IEE	English (full version)	ADB website: https://www.adb.org/
	Russian (full version)	- MIFT-PIU website <msciudpuz.webnode.ru> - sent to the Djizzak branch of the SCEEP, and administrative units in the project area - also made available at the offices of the PIU and PIU Field Coordinator
	Uzbek (summary)	
SAEMR	English	ADB website: https://www.adb.org/
	Russian	- MIFT PIU's websites <msciudpuz.webnode.ru>

IEE = initial environmental examination, SAEMR = semi-annual environmental monitoring report

C. Further communication with stakeholders

401. Future consultations for project stakeholders will follow as mentioned below.

(i) During implementation stage, in case of any changes in the design/alignment/location and unanticipated environmental impacts become apparent, the IEE will be updated accordingly. The PIU-NES in assistance with PIU Field Coordinator will hold at least one public consultation meeting in project mahallas at early stages to solicit perceived impacts, issues, concerns and recommendations from affected communities. The way of conduction public consultation should be agreed with Djizzak Suvtaminot LLC and local hokimiyat in order to meet national requirements and WHO technical guidance in dealing with COVID-19.

(ii) Prior to construction, the PIU with support of PIU Field Coordinator 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 GRM, contact details of PIU Field Coordinator and PIU, and status of compliance with the Government's environmental safeguard requirements.

VIII. GRIEVANCE REDRESS MECHANISM

402. This mechanism provides for the grievance of any actions and decisions that violate the rights and legitimate interests of citizens affected by the project and stipulates the procedure for dealing with grievance from individuals and legal entities within the framework of the project implementation.

403. In accordance with ADB SPS, the GRM will be established right after the project becomes effective. The main goals of the mechanism are ensuring the free submission and timely redress of grievances and concerns submitted by the project affected persons, as well as resolve grievance at the project level. Along with the ADB requirements on development and establishment of GRM in the processes of investment projects implementation, the grievance redress procedure in the country is also regulated by the national legislation of the RUz by the law "On appeals of individuals and legal entities" (No. 445, 2017).

404. GRM will be established at the project level, considering the local legislation on the resolution of grievance, to ensure that the affected persons are provided with a timely resolution of issues arising because of the project.

405. Individuals and legal entities in the project areas will be fully informed of their rights and of the procedures for addressing grievance whether verbally or in writing during public consultations and through local media.

406. GRM at the project level will not impede access to judicial or administrative remedies. Affected persons can approach a court at any time, independent of the project level grievance redress process.

407. The project proposes three levels of the GRM:

(i) **Level-1** – PIU Field Coordinator together with the project beneficiary (cities khokimiyats, Djizzak Suvtaminot LLC) or contractor;
(ii) **Level-2** –MIFT-PIU;
(iii) **Level-3** – Court of Law (Economic Court).

Table 36: Contacts of the grievances redress responsible agencies

Djizzak city	PIU Field Coordinator	To be defined before the first civil work contract is awarded.
	Khokimiyat of Djizzak city	Djizzak city, Uzbekistan street, Hamid Olimjon mahalla, 13 E-mail: jizzak.sh@exat.uz Phone number: +998722224010; +99872222497
	"Djizzak Suvtaminot LLC" LLC	Djizzak city, str. Sharof Rashidov ko'chasi, 115 E-mail: jizzakh_suvtaminoti@mail.ru

		Contact phone number: +998722260325
PIU	MIFT-PIU	Tashkent city, T. Shevchenko street, 34 E-mail: iudpuzbekistan@gmail.com contact phone number: 71 252 42 20

PIU = Project Implementation Unit

A. Level 1: PIU Field Coordinator together with the project beneficiary (cities khokimiyats, Djizzak Suvtaminot LLC) or contractor

408. At this level, an applicant submit grievance directly to the PIU Filed Coordinator, who, after the registration of received grievance (application, proposal, grievance), will notify the applicant of the receipt of the grievance and, if requested, will submit registration data according to the records of the registration card (including the registration number, date of registration, person who received the grievance, etc.).

409. PIU Filed Coordinator will inform the applicant concerning the procedure and terms of the grievance redress, will study the nature and specifics of the grievance and, within its powers, will take measures for its redress. In parallel, PIU Field Coordinator will inform MIFT-PIU and the relevant beneficiary of the project (cities khokimiyats, Djizzak Suvtaminot LLC) of the received grievance.

410. If necessary, PIU Filed Coordinator will send grievance to the relevant party to resolve the issue in accordance with the established procedure. Depending on the nature of the grievance, it can be forwarded for redress to state authorities and local authorities (contractor, mahalla community council, khokimiyat, the city's Djizzak Suvtaminot LLC, as well as to specially authorized state bodies (the SCEEP, the ASEW, the State Architecture and Construction Inspectorate, the State Committee on Land Resources, Geodesy, Cartography and State Cadastre, etc.).

411. Also, affected person may approach the Contractor. A Grievance Redress Register must be maintained by the contractor and shared with MIFT-PIU and PIU Field Coordinator for all such grievances. The contractor shall register the grievance and make efforts to resolve the grievance at that level in a consultative manner.

412. At this level, the grievance will be redressed within 15 days from the date of receipt with the adoption of a relevant decision.

413. Grievance redress will comply with the requirements of the legislation of the RUz requirements.

414. Based on the results of the grievance redress, PIU Filed Coordinator will inform the complainant and MIFT-PIU concerning the redress results and the measures taken. At this level, PIU Filed Coordinator will be a focal point for dealing with grievance and it will ensure close interaction with local state authorities and public administration bodies for timely and high-quality grievance redress.

B. Level 2: MIFT-PIU

415. In case the grievance cannot be redressed at the first stage due to its specifics or the applicant is not satisfied with the decision made, he/she can submit the grievance directly to MIFT-PIU who address the grievances at this level.

416. After the registration of received grievance (application, proposal, grievance), PIU will notify the applicant of the receipt of the grievance and, if requested, will submit registration data according to the records of the registration card (including the registration number, date of registration, person who received the grievance, etc.).

417. If the issue raised in the grievance is not directly related to the project, PIU will familiarize the applicant with the goals and objectives of the project, the measures provided for within the framework of the project implementation and provide an appropriate explanation

of the reasons why this grievance cannot be redressed by PIU, after which the further instance will be recommended to the applicant where he/she should apply for the decision making.

418. When receiving grievance, PIU will take the following actions:

- If necessary, it will establish grievance handling team, which will include the PIU Field Coordinator, PMSC, representatives of Djizzak Suvtaminot LLC, and Contractors, local state authorities and public administration bodies (khokimiyats);
- If necessary, it will arrange the reception of the applicant and consultation on issues of interest within the framework of the project, collection of information regarding the grievance, as well as monitoring for their complete, timely and high-quality redress;
- The team will also ensure interaction with an independent appraiser (in case of grievances related to the assessment) to obtain an appropriate evaluation decision (report);
- The grievance will be redressed within 15 days from the date of receipt, and in the case when additional study is required, up to one month.

C. Level 3: Court of Law (Economic Court)

419. If the grievance raised was not solved or the applicant does not agree or is dissatisfied with the decision made, he/she may apply to a higher authority in the order of subordination or directly to the court for deciding in accordance with national legislation.

D. Overview

420. The GRM will equally apply to all stakeholders (including project affected persons, businesses and households).

421. PIU and the project beneficiary are responsible for grievance registration, ensuring the procedure for grievance redress, including actions taken to resolve the issues raised data collection, minutes of meetings and other materials, recording, summarizing and analyzing grievance, preparing a report on each grievance and compiling an overview.

422. MIFT-PIU will keep records, summarize and analyze the received grievance. In addition, the Contractors will include information about grievances in their monthly and quarterly reports. The PIU, in turn, will include summary information in the SAEMRs and social safeguards monitoring reports that will be submitted to ADB.

423. Complainants can also use the ADB Accountability Mechanism by directly contacting the Headquarters in Manila the Complaint Receiving Officer of the ADB Headquarters Accountability Mechanism at the following address: ADB Avenue, 6, Mandaluyong City 1550, Philippines, Email: amcro@adb.org.

424. The ADB Accountability Mechanism is the highest instance. ADB is available as a resource in case other mechanisms for grievance resolving do not give results.

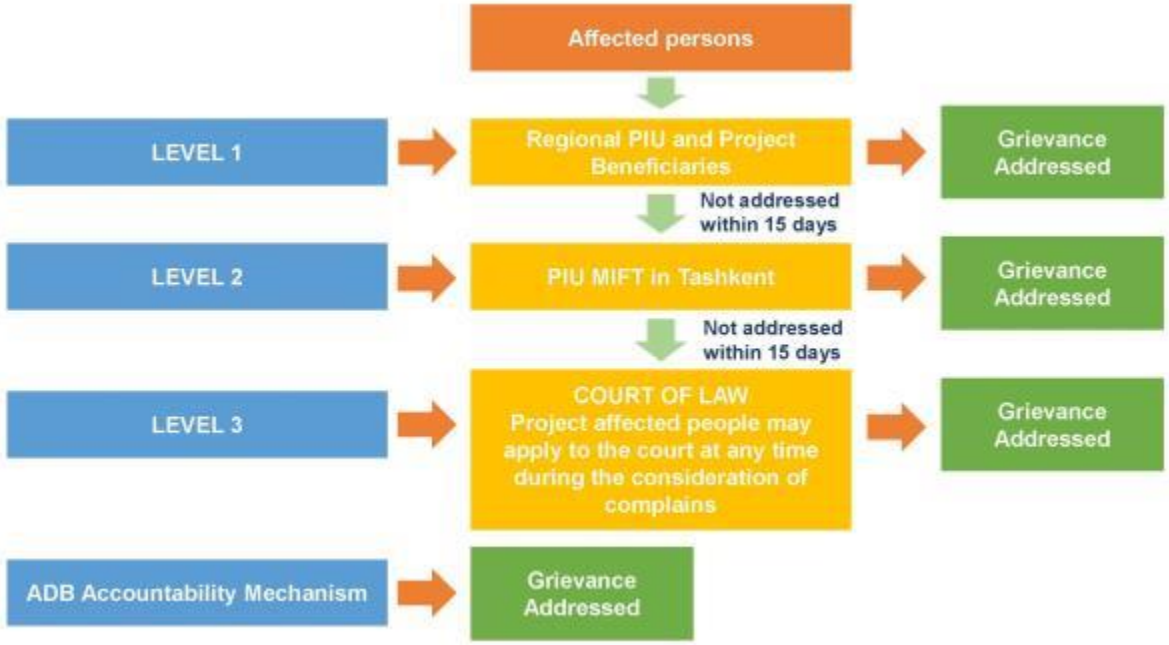


Figure 62: Procedure and stages of the grievance redress mechanism

IX. ENVIRONMENTAL MANAGEMENT PLAN

425. The EMP compiles the comprehensive information gathering a summary of impacts identified during impact assessment, the actions required to mitigate those impacts in accordance with the laws of Uzbekistan and the ADB SPS; and the monitoring activities that are to be undertaken as part of the project to confirm that they have been effective in reaching their objectives.

426. Proposed mitigation and management measures targeted to avoid, reduce, mitigate or compensate for identified significant adverse impacts. The EMP consists of the following key components:

(i) Environmental Mitigation measures;
(ii) Environmental Monitoring;
(iii) Implementation Arrangements.

427. The principal purpose of an EMP is to provide a guide for MIFT-PIU and Contractors in the formulation of appropriate management systems, plans and procedures to ensure compliance with national and ADB safeguards requirements. The requirements set out in this section and subsequent EMP should be included within contractual documentation with the relevant parties, as appropriate, to ensure there is clarity and commitment regarding contractor obligations related to environmental, health and safety management of the Project.

428. The EMP also details the institutional arrangements and capacities that currently exist, or that will be put in place during project implementation, to ensure that the IEE (including the EMP) has (i) comprehensively considered both Uzbek and ADB requirements for environmental protection, (ii) identified all likely environmental 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.

A. Environmental Mitigation Measures

429. Mitigation measures required to address the impacts identified by this IEE have been consolidated in the following EMP (**Table 37**). The table provides information on anticipated

significant impacts during the pre-construction, construction and operation phases with proposing mitigation measures, defining responsible party(s) for their implementation. PIU-NES, PMSC-IES/NES) and Contractor's environmental engineer and OHSE will be responsible people for EMP implementation.

430. Contractor(s) will be required to prepare SSEMP outlining how they intend to implement the EMP, describing the precise locations of the required mitigation /monitoring, the persons responsible for the mitigation / monitoring, the schedule and reporting methodology. The SSEMP needs to include COVID-19 Health and Safety Management Plan and emergency response plan and other TSEMPs (para. 246 on page 86) as required, which are prepared based on risk assessment following relevant government regulations and guidelines or international best practices.

Table 37: Environmental Management Plan

Impact	Mitigation measure	Responsibility	Cost
Pre-construction stage			
Lack of proper environmental requirements in the bidding documents	1. PIU with the assistance of PMSC will ensure inclusion of environmental provision along with EMP in the bidding documents and in contracts for Contractors;	PIU-NES assisted by PMSC-NESs	Included in PMSC and PIU budgets
Improper assessment of bidders' environmental capacity	2. Bids evaluation will be done with consideration of capacity of bidders to meet EMP requirements, proposing adequate budget efficient for EMP implementation, existence of good practice in environmental performance within other similar projects;	PIU-NES assisted by PMSC-IES	Included in PMSC and PIU budgets
Improper development of SSEMP	3. Prior to commencing any physical works, SSEMPs including TSEMPs will be developed by the Contractors under the guidance of the PMSC and be endorsed by PMSC before submission to PIU for approval. TSEMPs will have to be prepared for the following activities: • Traffic Management Plan (TMP); • Asbestos-Containing Materials Management Plan (ACMMP); • Wastes Management Plan; • Spoil Management Plan; • Spill Response Plan; • Construction Camp Management Plan (CCMP); • Occupational Health and Safety Plan (OHSP); • COVID-19 Health and Safety Management Plan and emergency response plan	PIU-NES assisted by PMSC-IES	Included in PMSC and PIU budgets
Inadequate monitoring of EMP implementation	1. Develop a format for site inspection to optimize a process of environmental supervision	Contractor with assistance of PMSC-NES	Included in the Contractors and PMSC budgets
Non-compliance with national and international requirements during bidding for procurement of machinery and mechanisms	2. Goods procured for project implementation will be done in compliance with ADB Prohibited Investment Activities List set forth at Appendix 5 of ADB SPS; 3. Environmental specifications will be included in bidding packages for purchase machinery within the project. Particularly, toxic level of	PIU Procurement specialist and PIU-NES assisted by PMSC-relevant specialists	Included in PMSC and PIU budgets

Impact	Mitigation measure	Responsibility	Cost
	machinery will meet "Euro 3" environmental requirements as defined by national regulations62;		
Non-compliances with national procedure of works. Accidents due to damage of underground utilities	4. Prior to civil works, the Contractor will get non-objection from all utility agencies such as gas supply, telecommunications, electricity etc.	Contractor with support of PIU	Included in Contractor's and PIU budgets
Generation of different potential environmental impacts due to changes in design, layout	5. If there are any unanticipated impacts, the IEE/EMP will be updated to account for any additional or new environmental impacts and relevant corrective actions;	PIU-NES assisted by DED Consultant, PMSC-IES and PMSC-NES	Included in PMSC and PIU budgets
Non-compliances with national procedure on cutting trees	6. Prior to commencement of civil works which have a risk to affect or cause to cut the trees, receive permission on cutting trees from SCEEP as it is indicated in RCM #43 dated (2019); 7. Update LARP (if necessary) and pay compensations prior to cutting trees	Contractor PIU- SSS assisted by PMSC-NSS	Included in Contractor's budget Included in PIU's budget
Interaction with hazardous materials	8. Prior to commencement of construction works PMSC will conduct vision observation of demolishing buildings on presence of asbestos materials. 9. In case of presence of asbestos materials, the Contractor will develop ACMMP that includes identification of hazards, the use of proper safety gear and disposal methods. (Sample ACMMP is provided in Appendix 3. Sample of Asbestos-Containing Materials Management Plan) 10. Any activities involving asbestos materials will be prohibited until the ACMMP is approved by the PIU and the PMSC;	PMSC-NES Contractor in assistance by PMSC	Included in PMSC and Contractor budgets
Receiving all required permission for conducting works	11. Permission/license for using existing borrow pits or opening new ones (if any) 12. Permission for cutting trees (in case of necessity of cutting trees which are not belonged to population and not part of LARP)	Contractor	Included in Contractor budget

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

Impact	Mitigation measure	Responsibility	Cost
	13. Permission on water use during construction phase		
Climate change	14. Sewage network design is able to cope with the moderate increases in precipitation intensity and maximum 1-day precipitation events. 15. Materials selection and further design are able to cope with low winter temperatures.	PMSC	Included in PMSC budget
	16. Equipment purchased by IUDP will be energy efficient	PMSC and MIFT-PIU	Included in PMSC, and MIFT-PIU budget
Construction stage			
Air pollution	1. Apply watering of construction sites and roads inside settlements during dry season; 2. Cover transported bulk materials; 3. Control speed limitation for vehicles during movement inside of settlements - no more than 30 km/h; 4. All vehicles and equipment will comply with technical requirements and will pass regular inspection as indicated in the national standards[63]; 5. Restrict demolition activities during the period of the high winds or under more stable conditions when winds could direct dust towards adjacent houses; 6. Conduct regular monitoring of air quality at 18 locations indicated in Table 28. In case of non-compliances with standards or grievance from the population, apply additional mitigation measures, such as more frequent watering. 7. Plan project works in a way to make sure that timeline Urban development component implementation will not overlap with component on water supply and sanitation.	Contractors implement PIU-NES and PMSC-NES monitor implementation PMSC conduct air quality measurement monitoring at 18 locations indicated in Table 28	Included in the Contractors, MIFT-PIU and PMSC budgets
Noise and vibration	8. Establish limits on speed for vehicles inside of settlements (30 km/h);	Contractors implement measures	Included in the Contractors budget For installation of acoustic barrier/ wall - $ 10,000.0

[63] "O'z DSt 1057:2004 Vehicles. Safety requirements for technical conditions" and "O'z DSt 1058:2004 Vehicles. Technical inspection. Method of control".

Impact	Mitigation measure	Responsibility	Cost
	9. In the settlement areas, construction works generating noise will be undertaken during period from 8:00 in the morning and until 8:00 in the evening; 10. Avoid construction works in front of schools during the period from 8:30 until 15:00 during the weekdays and Saturday. Apply additional mitigation measures (installation of acoustic screens, mufflers for machinery, etc.) in case of urgency or technical needs of such works; 11. Prepare and implement OHSP; 12. Schedule construction to minimize the multiple use of noisier equipment near sensitive receptors (houses, schools); 13. Use of PPE by workers involved in demolishing and construction works in conditions of increased noise level is mandatory; 14. Inform population about anticipated works at least one week before.	PIU and PMSC monitor implementation	
	15. Conduct monitoring of the noise level in the points indicated in Figure 56 and Table 28. In case of exceeding standards (Table 4), apply additional measures (installation of acoustic screens);	PMSC	Included in PMSC budget (Table 41)
Pollution of surface and ground water	*Surface water* 16. Construction camp (if any) will be located on the territory of the Sangzar water intake. It will be strictly prohibited to conduct any repairing works of machinery on the territory of water intake; 17. Construction camp will have to be located at a safe distance from water courses (no closer than 100 m); 18. Management and storage of fuel, waste oil, hazardous waste will be planned in accordance with EHS General Guidelines on Hazardous Materials Management. This includes the use of appropriate secondary containment structures capable of containing the larger of 110 % of the largest tank or 25% of the combined tank volumes in areas with above-ground tanks with a total storage volume equal or greater than 1,000 liters; 19. Spill cleanup equipment will be maintained on-site. Should any accidental spills occur, the immediate cleanup will be undertaken, and all cleanup materials will be stored in a secure area for further disposal. Disposal of such will be undertaken by a waste	Contractors implement PIU and PMSC monitor implementation	Included in the Contractors budget

Impact	Mitigation measure	Responsibility	Cost
	management company contracted by the Contractors. The waste management company must have the required licenses to transport and dispose any hazardous waste before any such waste is removed from the site. The Contractors will keep copies of the company's licenses and provide waste transfer manifests at their camp site for routine inspection by the engineer. 20. Fueling operations and equipment maintenance will occur only within special designated containment areas bounded and provided with impermeable lining to contain spillage and prevent soil and water contamination. The area will be equipped with a drainage system which will be connected to wastewater treatment system including oil separator. Prohibit conduct this works in the area within 50 m from water streams; 21. A bio-toilet will be built on the territory of the construction site to collect domestic and fecal wastewater. As the effluent accumulates, it is transported to the nearest treatment facilities – Djizzak WWTP. The Contractor will conclude the agreement with local agency responsible for the collection wastewater from the toilets and its disposal. 22. Labor camps and construction sites will be equipped with sanitary latrines that do not pollute surface waters. Domestic wastewater from labor camps and construction sites will be canalized into septic tanks which will be installed by the contractors. The septic tanks will be timely emptied by hired septic trucks and transported to Djizzak WWTP. 23. Keep copies of the transportation company's licenses and provide waste transfer manifests at its camp site for routine inspection by the engineer. 24. No wastewater will be dumped into any ditches or streams. 25. Construction wastewater arising on the site will be collected, removed from the site via a suitable and properly designed temporary drainage system and disposed of at a location and in a way that will cause neither pollution nor nuisance 26. For the works implemented remotely from the construction camps, Contractor will use bio toilets. The Contractor will conclude the		

Impact	Mitigation measure	Responsibility	Cost
	agreement with local agency responsible for the collection wastewater from the toilets and its disposal; 27. Topsoil stripped material will not be stored where natural drainage will be disrupted; 28. Ensure presence on the construction site spoil collection kits *Ground water* 29. Avoid location of construction camps within territory of ground water intake or buffer zone (30m) along staying wells which are used for drinking purposes; 30. During replacement of pumps on wells, strictly follow the protocol described in KMK 2.04.02-97[64];		
Losses of topsoil and soil contamination	31. The topsoil of about 30 cm depth will be removed and stored separately during excavation work, not higher than 2m with 45o edge, fenced at least with special tapes and after the construction of the main trunk pipes the same soil will be placed on the top, in unpaved areas; 32. To minimize soil compaction, movement of all type of vehicles will be allowed only through identified access roads; 33. Install protection screens/nets along the river in the points crossing the river, to prevent collapsing of excavated soil into the river; 34. Contractors will be required to use only authorized carriers with getting all necessary permissions per respective national legislation; 35. Contractor will prepare Spoil Management Plan as part of SSEMP and will ensure its properly implementation.	Contractors implement PIU and PMSC monitor implementation	Included in the Contractors budget
Waste management	*Hazardous wastes* 36. A Waste Management Plan will be developed by Contractor, endorsed by PMSC and approved by PIU for the construction sites with demolishing works. The Plan will include information about type of generating wastes, amount, procedure of their collection	Contractors implement PIU and PMSC monitor implementation (PMSC will conduct	Included in the Contractors budget

[64] The protocol defines a procedure of pumps replacement which avoids pollution of ground water.

Impact	Mitigation measure	Responsibility	Cost
	and disposal. The plan also will include information about responsible person, training, action plan for emergency; 37. Develop and implement spill response plan; 38. Refueling vehicles and replacement oils also will be conducted in special designated and properly equipped places. Emergency facilities will be at the place for elimination of accident of oil spills; 39. Used oil from vehicles and machinery will be collected into containers placed at the concreted sites and disposed to national oil company designated for accepting and handling of used oils; 40. Used batteries will be collected separately and transferred to the local branches “Cvetmet”65 for further disposal. *Asbestos containing materials waste* 41. Prior to commencement of construction works, PMSC will conduct visual observation of demolishing buildings on presence of asbestos materials. 42. In case of presence of asbestos materials, the Contractor will develop Asbestos-Containing Materials Management Plan (ACMMP) that includes identification of hazards, the use of proper safety gear and disposal methods. (Sample ACMMP is provided in Appendix 3. Sample of Asbestos-Containing Materials Management Plan). 43. Any activities involving asbestos materials will be prohibited until the ACMMP is approved by PMSC and the PIU; 44. Conduct all works on demolishing in accordance with approved ACMMP; 45. Conduct awareness program on safety during the construction work. *Non-hazardous wastes* 46. Conclude contract with waste disposal organization for the timely transportation and disposal of non-recyclable wastes, prior to the commencement of any civil works	visual observation of demolishing buildings on presence of asbestos materials prior to commencement of construction works,)	

[65] Local entity responsible for collection and treatment non-ferrous metals.

Impact	Mitigation measure	Responsibility	Cost
	47. Put proper waste bins at a related areas of construction sites and workers camps; 48. Segregation of wastes on recyclable and non-recyclable wastes; 49. Selling recyclable wastes to relevant organizations (paper, scraps, accumulators) and timely disposal of non-recyclable wastes to the municipal landfill. 50. Providing bio toilets for workers at the construction sites and timely disposal of waste waters to the Djizzak WWTP; 51. Undertake the construction work stretch-wise; excavation, pipe laying and trench refilling will be completed within no longer than five days; 52. Waste disposal will be done in accordance with agreement concluded between Contractor and waste disposal organization in timely manner (no more than 3 days) only on official landfills; 53. Burning of waste on any construction site is forbidden.		
Impact on flora	54. During the DED, select an alignment of pipeline in a way which allows to minimize cutting of trees and bushes; 55. Prior to starting civil works, all trees which will be cut will be marked to avoid unnecessary cutting trees; 56. Conduct joint revision of the project sites with representatives of inspectors from relevant district branches of SCEEP to identify number of cutting bushes and trees if any and to receive permission from SCEEP and Djizzak city Khokimiyat (for trees cut inside city) and Djizzak province Khokimiyat for (for trees outside of the city) on cutting trees as it is indicated in Resolution of Cabinet of Ministries of RUz #43 dated 17 January 2019; 57. Do not use chemical and burning for removing vegetation.	Contractors implement PIU and PMSC monitor implementation	Included in the Contractors budget. Cost for replanting trees is $28,000
Socio-economic environment	58. Construction during agricultural off- season will minimize the impact (loss of agricultural income). Major crops in the project area that could be affected are sunflower, rice, and vegetables which growing seasonally; 59. If cutting trees is unavoidable, to compensate losses as indicated in the LARP for this project and in cost for trees.	Contractors implement PIU and PMSC monitor implementation	Included in the PMSC budget

Impact	Mitigation measure	Responsibility	Cost
	60. Hire local population with suitable qualifications for works to the extent possible; 61. Prepare a work plan of construction works in a way allowing to minimize impact on economical income of commercial facilities. If works in front of commercial facilities will be conducted for longer than 3 days, install temporary bridges; 62. Inform population in advance about planning works.		
Occupational and Community Health and Safety	*For community* 63. Contractor will inform population about anticipated works in the settlement in advance. Prior to starting construction works, Contractors will share work plan with indications timeline and places. The works will be planned in the way, ensuring that trenches will not stay open more than 5 days; 64. Contractors will be required to develop a Traffic Management Plan (TMP)66 as part of the SSEMPs 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. Agreement on the TMP will be obtained from Traffic Police. The TMP will be disclosed to local community prior to commencement of construction works on respective sites; 65. 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. 66. install temporary bridges and effectively organize works, which will allow avoid unreasonable delaying of construction works; 67. Install safe temporary bridges across ditches for residents living in areas close to construction sites to minimize potential of falls due to the need to use alternative passages; 68. All construction sites (especially inside settlements) must be properly lightened and fenced;	Contractors implement PIU and PMSC monitor implementation	Included in the Contractors budget Cost for bio toilets is $ 4,800.0

[66] The template is in Appendix **4.** Template of Traffic Management Plan.

Impact	Mitigation measure	Responsibility	Cost
	69. After completion of construction works, all roads will be rehabilitated at least up to condition of pre-construction stage; 70. Carry out regular awareness campaigns among work staff, including specific hazards associated with the spread of HIV/AIDS. 71. Contractor will develop a CCMP in reference to Workers' Accommodation: Processes and Standards67 as part of SSEMP and implement; 72. After completion of the main construction, Contractor will provide full reinstatement of the construction and camp sites by bringing them to its primary condition; 73. Remove all rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required; 74. All hardened surfaces within the construction camp area will be ripped, all imported materials removed; and 75. PMSC will conduct post-construction audit during defect liability period to make sure that construction sites and camps are properly cleaned and restored to pre-project conditions before acceptance of works before hand-over to Djizzak Suvtaminot LLC. *Occupation Health and Safety* 76. Contractor will comply with requirements of Labor Code of Uzbekistan (1998) and standards on work and health safety;68 77. Contractors will develop OHSP. PMSC will review and endorse and the PIU will approve the plans; 78. Contractors will ensure proper implementation of the above plans; 79. Djizzak Suvtaminot LLC will coordinate works with local khokimiyats and Traffic Police. *COVID-19* 80. The Contractors will be required to (i) assess implications of the project-level COVID-19 related risks and impacts; (ii) identify necessary risk mitigation measures; and (iii) prepare a COVID-19		

[67] A guidance note by IFC and the EBRD Workers' Accommodation: Processes and Standards (August 2009)
[68] Construction Norms and Rules # 3.01.01-03. Organization of Construction works. 2003

Impact	Mitigation measure	Responsibility	Cost
	Health and Safety Management Plan and emergency response plan. The COVID-19 Health and Safety Management Plan should be aligned with any government regulations and guidelines on COVID-19 prevention and control, or in the absence thereof, with international good practice guidelines as may be updated from time to time. The COVID-19 Health and Safety Management Plan would be reviewed by the PMSC in consultation with public health inspectors of the area, local medical officers and other relevant health specialists, with a recommendation forwarded to the PIU for clearance. The status and adequacy of project's COVID-19 response would be fully documented in the SAEMRs. 81. If a suspected incidence of COVID-19 is reported of any member of the project team during implementation of the project-related activity (including consultation and public participation), the activity will stop immediately for a review of the adequacy of the safety system of work and a corrective action will be implemented to address any identified gaps in the safety system of work prior to recommencement of the activities. All such incidence will be reported to ADB immediately for review. 82. In conditions of pandemic risk, organize works in accordance with regulatory documents indicated in Chapter V.B.2.d)(3) of the IEE; 83. Ensure proper recording and reporting of any cases of infection and undertaken actions;		
Archeological heritages: Chance of finding heritage	84. Excavation and other works will be suspended immediately; 85. Area with possible heritage will be fenced with fencing tape; 86. A designated focal point from a local administration (khokimiyat) will be informed and invited to assess potential heritage and undertaken necessary actions; 87. Civil works at the finding place will be recommenced after obtaining permission from the focal point.	Contractors implement PIU and PMSC monitor implementation Representative from Khokimiyat assists in assessment and undertakes necessary actions	Included in the Contractors budget
Impact from the existing facilities (Amir Temur Water	**<u>Amir Timur Water Intake</u>** 88. Complete fencing of whole water intake (4 km)	Contractor	See Table 22

Impact	Mitigation measure	Responsibility	Cost
Intake and Sangzar Water Intake)[69]	89. Ensure equipment of water intake with fire protection facilities in accordance with national standards **<u>Sangzar Water Intake</u>** 90. Ensure proper work of chlorination unit 91. Conduct regular training on health and safety during maintenance of chlorination unit		
	<u>Amir Timur Water Intake</u> 92. Ensure that permissions on water use are received in accordance with national requirements **93.** Ensure that fence installation is fully completed and ensure that there are no any agricultural activities on the territory of water intake **<u>Sangzar Water Intake</u>** 94. Conduct regular training on health and safety during maintenance of chlorination unit **95.** Ensure that permissions on water use are received in accordance with national requirements	Djizzak Suvtaminot	See Table 22
Operation phase			
Impact on water resources	1. Develop Statement on Environmental Consequences (SEC) and receive no objection from SCEEP 2. Ensure that withdrawing amount of water follows established limits (as indicated in Conclusion from the SCEEP) for each water intake; 3. In case of necessity to increase water withdraw, receive permission in accordance with Resolution of Cabinet Ministries of RUz # 255 dated from 31 March 2018.	Djizzak Suvtaminot LLC, Environmental Health and Safety Specialist	Included in the operation cost of Djizzak Suvtaminot LLC
20. Waste management (*Hazardous waste*)	4. Provide training on handling and disposal bactericidal lamps for Djizzak Suvtaminot LLC staff involved in the maintenance of the ground water wells; 5. Ensure proper implementation of guidance on handling of bactericidal lamps by Djizzak Suvtaminot LLC staff;	Djizzak Suvtaminot LLC, Environmental Health and Safety Specialist	Included in the operation cost of Djizzak Suvtaminot LLC

[69] Chapter C: Existing Facilities

Impact	Mitigation measure	Responsibility	Cost
	6. Conclude agreement on disposal used lamps with relevant agencies working on disposal of lamps.		

DED = detailed engineering design, EMP = Environmental Management Plan, OHSE = (Contractor's) Occupational Health and Safety Engineer, PIU = Project Implementation Unit, PIU-NES = PIU's National Environmental Specialist, PIU-SSS = PIU-Social Safeguard Specialist, PMSC = Project Management and Supervision Consultant, PMSC-IES = PMSC's international environmental specialist, PMSC-NES = PMSC's national environmental specialist, PMSC-NSS = PMSC's national social safeguards specialist, SPS = ADB's Safeguard Policy Statement (2009), SSEMP = Site Specific Environmental Management Plan

B. Environmental Monitoring

431. To ensure that mitigation actions are implemented in accordance with the requirements of the EMP, monitoring will be undertaken as follows:

- Instrumental Monitoring for environmental quality such as air, water, soil quality and noise level. Costs for this equipment and services are included in PMSC budget.[70] Schedules, parameters, locations are presented in **Table 38**.
- Observational Monitoring – Throughout the Projects Construction phase, Contractor's environmental engineer and OHSE and PMSC will continually monitor the Contractors actions. This will be achieved through weekly inspections of the Contractors environmental performance by PMSC-NES throughout the construction period. PMSC will have the right to suspend works or payments if the Contractor is in violation of any of his obligations under the EMP and SSEMPs.

432. Developed within current IEE, an EMoP provides details on required measurements, the locations of measurements points, frequency and responsibilities associated with each monitoring task (**Table 38**).

433. Besides instrumental environmental monitoring indicated in **Table 38**, monitoring of EMP's implementation will be carried out. For efficient implementation of this activity, several levels of supervision activities will be undertaken: (i) daily inspection by Contractor's environmental engineer and OHSE, (ii) monthly inspection by PMSC-NES, and (iii) periodic audit (quarterly) by PIU-NES.

434. Results of environmental performance including monitoring activity will be properly documented and reported. Each Contractor will perform a book logbook with information about conducted training on Environmental, Health and Safety 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) will also be kept in the separate file for records.

435. Prior to commencement of the civil works, Contractors with assistance of PMSC will develop a format for site inspection to optimize a process of environmental supervision. The format could be in form of checklist with list of mitigation measures to be implemented at the construction sites, their performance status and some explanations as required.

[70] Noise level will be monitored both by PMSC and the contractor.

Table 38: ENVIRONMENTAL MONITORING PLAN

Mitigation measures	Parameter to be monitored	Location	Frequency	Responsibility	Standards	Cost
Construction Stage						
A. Air quality	NO_x, SO_2, CO	At 18 points indicated in Table 28 and Figure 56	Weekly and in case of grievance from population	PMSC will hire certified laboratory to conduct analysis	Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the RUz including Annex 1. SanR&N RUz No.0179-04 (Table 11: Ambient Air Quality Standards)	Costs of hiring external laboratory is included in PMSC budget (Table 41)
	Dust	At 18 points indicated in Table 28 and Figure 56. (18 points is total number, however, works could be implemented in 6-10 points at the same time)	Weekly and additional in case of grievance from population	PMSC	Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the RUz including Annex 1. SanR&N RUz No.0179-04 (Table 11: Ambient Air Quality Standards)	Dust measurement device. The cost is included in PMSC budgets. (Table 41)
B. Noise level	Noise level	At 18 points indicated in Table 28 and Figure 56. (18 points is total number, however works could be implemented in 6-10 points at the same time)	Daily (by contractor) and weekly (by PMSC) in case of grievance from population	Contractor – on daily base PMSC – on weekly base	1. "Sanitarian Norms of allowed level of noise *at the construction sites*" SanR&N №0120-01 (Table 4: Maximum allowable noise standards (dB): comparison of national and international maximum allowable noise standards (dB)) 2. SanR&N No.026709 Sanitarian Rules and Norms on providing allowed noise level *in the living building,*	Noise measurement devices (4 units). The cost will be included in Contractor and PMSC budgets (Table 41)

Mitigation measures	Parameter to be monitored	Location	Frequency	Responsibility	Standards	Cost
					public building and territory of living areas (Table 4: Maximum allowable noise standards (dB): comparison of national and international maximum allowable noise standards (dB))	
C. Water quality	Oil products, dry residual, BOD, COD, pH, ammonia, SO_4	Sangzar river, in 2 points, where main pipeline crosses river. Two samples from each point: 1. 100 m before, and 2. 500 m after construction site;	1. Baseline – before construction works 2. During construction works while crossing the river– twice per week	PMSC will hire certified laboratory to conduct analysis	"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 (Table 12: General water standards)	Costs of water quality analysis will be included in PMSC budget. (Table 41)
D. Waste generation	Amount/kind of wastes generated and how they were disposed (how and when)	All construction sites	Monthly	Contractors	Compliance with the EMP and Waste Management Plan and Spoil Management Plan	Waste generation
Operation Stage						
E. Water quality	Water quality in wells	In the operating wells (wells extracting water)	In accordance with national Standards	Djizzak Suvtaminot LLC, water quality laboratory	State standard O'zDSt 950:2000 Drinking water	Costs are included in the Djizzak Suvtaminot LLC operation cost

Mitigation measures	Parameter to be monitored	Location	Frequency	Responsibility	Standards	Cost
F. Proper bactericidal lamp disposal	Disposal of lamps only to certified company	For Zilol-1, Zilol-5, Kimyogar wells equipped with bactericidal lamps	Once per two years	Djizzak Suvtaminot LLC, Environmental, Health and Safety specialist	Level of sludge should not exceed half of effective volume of septic tanks	Costs are included in the Djizzak Suvtaminot LLC operation cost

C. Reporting

436. The proposed reporting system is for whole Integrated Urban Development Project. The semi-annual environmental monitoring report (SAEMR) will cover three sub-components: (i) WSS in Djizzak; (ii) Urban Development Component in Havas, Khiva, and Djizzak; and (iii) Solid Waste Management in Djizzak, Khiva, Havas and Yangiyer.

437. During pre-construction, after loan effectiveness, the PIU-NES will prepare the SAEMRs for submission to ADB. The report will provide relevant information on implementation of mitigation measures/actions indicated in EMP for pre-constration phase.

438. During construction, contractor(s)' environmental engineer and OHSE will be responsible for the preparation of weekly environmental checklists and environmental section of the contractor's monthly progress reports. The template of checklist and format of monthly progress report will be endorsed by PMSC and approved by PIU prior to the construction commencement. The reports should comprehensively address all relevant aspects of environmental requirements and all environmental audits undertaken during the period covered by the report. The monthly reports will be reviewed and endorsed by the contractor's project manager and then submitted to the PMSC and PIU for review.

439. PMSC will prepare Quarterly Progress Reports to PIU which includes the information on the implementation and compliance with the EMP/SSEMP, including information on oil spills, accidents, grievance received, if any, and appropriate actions taken.

440. Based on the contractor's monthly environmental reports, observation from the site visit and the PMSC's Quarterly Progress Reports, the PMSC will support PIU in preparing SAEMRs (in January and July every year). MIFT-PIU will keep records, summarize and analyze the received grievances, include information about this in the semi-annual environmental monitoring reports (SAEMRs) and social safeguards monitoring reports, that will be submitted to ADB.

441. Within three months after completion of all civil works, a report on the project's environmental compliance performance (including lessons learned that may help MIFT and PIU in their environmental monitoring of future projects) will also be prepared. This report will be part of the input to the overall Project Completion Report.

442. During operation phase, MIFT-PIU will collect monitoring result information from (A) Djizzak Suvtaminot LLC on (i) WSS in Djizzak, (B) three Khomiyats on (ii) Urban Development Component in Havast, Khiva, and Djizzak; and (C) one regional Toza Hudud agency[71] on (iii) SWM in Havast and Yangiyer, and then prepare the SAEMR and submit to ADB until ADB's Project Completion Report is issued. Djizzak Suvtaminot LLC will also develop reports in accordance with requirements indicated in Statement on Environmental Consequences (SEC), in approved tabular formats on annual base and submit them to the regional SCEEP.

443. The SAEMRs will be disclosed on ADB website. The relevant information of the reports will be translated into both Uzbek and Russian languages and disclosed to the affected people by posting on MIFT- PIU website (**Table 35**). In addition to the above-mentioned reports, in case of any accident related to occupational and community health and safety, PIU is expected to (i) report to ADB within 72 hours, and (ii) prepare and submit an incident report with action plan within 7 days of the occurrence. PMSC will support the PIU in preparing such reports.

[71] Toza Hudud –agencies responsible for waste management on the provincial level

D. Implementation arrangements

1. Ministry of Investment and Foreign Trade (MIFT)

444. **MIFT** is the executing agency and responsible for overall Project coordination with government agencies, high-level decision making to ensure timely implementation, and liaising with ADB and other development partners. MIFT will provide detailed PIU staffing arrangement for Tashkent and other regions, and associated costs.

2. MIFT - Project Implementation Unit (MIFT-PIU)

445. MIFT-PIU will be the implementing agency and responsible for (i) day-to-day project management and administration; (ii) overseeing detailed designs, procurement, bid evaluation report preparation, and construction supervision; (iii) acting as the employer in all contracts; (iv) overseeing project financial management, accounting and auditing; (v) implementing institutional strengthening and capacity development; (vi) managing safeguards compliance; (vii) ensuring loan covenant compliance; (viii) maintaining a project performance monitoring system and preparing progress reports, and (ix) reporting to ADB and other government agencies.

446. The MIFT-PIU will be responsible for monitoring of implementation of EMP to comply with ADB's safeguards requirements and environmental national regulations. Currently, the MIFT-PIU is being implementing similar project named "Medium-Size Cities Integrated Urban Development Project" (World Bank) where full time environmental specialist is supervising project environmental compliance with Environmental and Social Management Framework. For IUDP, new MIFT-PIU (in Tashkent) with three PIU Field Coordinators (for Khiva, Djizzak city and Havast/Yangiyer respectively) will be established. The MIFT-PIU will hire one full time National Environmental Specialist (PIU-NES) exclusively for this project, who will be assisted by the PMSC-IES and PMSC-NES in overseeing the implementation of the EMP.

447. The PIU-NES should have at least a bachelor's degree in environmental sciences or equivalent, with at least 5 years' working experience in conducting environmental impact assessments and implementation of environment mitigation plans and/or monitoring implementation of environmental mitigation measures during implementation of projects including foreign aided project. The PIU-NES should be fluent in English, Russian and Uzbek.

448. The PIU-NES's responsibilities include the following, but not limited to:

(i) Ensure all necessary government permits and license, including ecological expertise opinion, permission for cutting trees and for all civil works will be obtained;
(ii) Ensure inclusion of EMP cleared by ADB and conditions of SCEEP's Environmental Appraisal in bid and contract documents;
(iii) Review and clear contractor's Site-Specific EMPs (SSEMPs);
(iv) Ensure that the SSEMPs contain COVID-19 Health and Safety Management Plan and Emergency Response Plan following international good practice and relevant national/local requirements;
(v) Carry out public consultation during project implementation;
(vi) Establish a GRM after the project becomes effective and act as the GRM secretary to make sure that the GRM is operational to effectively handle environmental and social concerns of project affected persons;
(vii) Build up and sustain institutional capacity in environmental management;
(viii) Supervise contractors and PMSC in implementation of the EMP for overall compliance with ADB SPS and project environment-related legal covenants;
(ix) Conduct environmental monitoring and ensure that the construction activities are carried out following the EMP and SSEMPs and in an environmentally-sound and sustainable manner;

(x) Ensure corrective actions are implemented when necessary;
(xi) Prepare semi-annual environmental monitoring reports (SAEMRs) and submit to ADB for disclosure, within 30 days after a completion of the monitoring period, until ADB's Project Completion Report is issued;
(xii) Disclose relevant information from environmental safeguards documents (including SAEMRs) to affected persons;
(xiii) Report in a timely manner to ADB of any non-compliance or breach of ADB safeguard requirements.
(xiv) Update the project's Initial IEE in case of unanticipated impacts.

3. PIU Field Coordinator

449. MIFT-PIU will mobilize three PIU Field Coordinators (for Khiva, Djizzak city and Havast/Yangiyer respectively) to supervise and monitor project activities and safeguards on the ground together with PMSC. For WSS subcomponent, the PIU Field Coordinator in Djizzak city will be based in one room in city administration and assist MIFT-PIU. The PIU Field Coordinator in Djizzak city will serve the main role in handling grievances at GRM Level 1 as well.

4. DED Consultant

450. DED Consultant (footnote 2) which is already on board has a National Environmental Specialist (3 person-months). His/her tasks are to:

(i) Ensure the DED is prepared in line with the IEE/EMP (alignment of pipeline is selected in a way which allows to minimize cutting of trees and bushes, etc.);
(ii) Assist MIFT-PIU in updating this IEE if there are any unanticipated impacts;
(iii) Cost all items in EMP and prepare BoQ items to be included in the procurement for the works;
(iv) Assist MIFT-PIU to establish a system to monitor environmental safeguards of the Project;
(v) Ensure that the relevant environmental mitigation measures specified in the EMP cleared by ADB is incorporated into bidding documents prior to issuance of the invitation for bidding;
(vi) Provide on-the-job training programs to PIU staff involved in project implementation for strengthening their capacity in managing and monitoring environmental safeguards.

5. PMSC

451. The PMSC is tasked with specific responsibility to assist PIU in ensuring safeguard compliance of IUDP civil works – with particular emphasis on the monitoring of implementation of EMP through the Contractors SSEMP and related aspects of the project. PMSC will assign an PMSC-IES) (4 person-months) and full time PMSC-NES (60 person-months) to ensure that the Contractor is compliant with its environmental obligations, and ensure compliance with environmental and social safeguards, including the EMP, SSEMP, health and safety standards and core labor standards.

452. The PMSC-IES, with the support of the PMSC-NES, will be responsible for supervising the contractor's environmental performance, coordinating the public consultations and project GRM, and assisting PIU to prepare SAEMRs.

453. During the pre-construction stage, s/he will prepare a detailed action plan including environmental monitoring checklists to be completed by the PMSC-NES to ensure that the Environmental Management System is established, implemented, maintained and will monitor its performance. S/he will also take care of all environmental issues during construction works. S/he will also review the buildings which will be demolished during civil works and check

presence of asbestos materials. In case of presence of such materials, assist to Contractor to develop ACMMP.

454. S/he will also conduct environmental training and briefings to provide environmental awareness on ADB and the government environmental safeguards policies, requirements and standard operating procedures in conformity with the government's regulations and international practice for project; ensure baseline and periodic monitoring and reporting of Contractor's compliance with contractual environmental mitigation measures during the construction stage. PMSC-IES will assist PIU in preparation of guidance for the preparation of TSEMPs, as indicated in EMP (Table 37). Upon completion of the civil works, PMSC-IES and PMSC-NES will prepare a report on the project's environmental compliance performance; including lessons learned that may help PIU and MIFT in their environmental monitoring of future projects. This report will be part of the input to the overall Project Completion Report.

455. The detail tasks for the PMSC-IES and PMSC-NES are provided below[72]:

(i) Observance of the Contractor's compliance with all contractual safeguards and health and safety (ESHS) standards in accordance with ADB requirements;
(ii) Draft IEE/EMP and RPs have been prepared and provided in each bid document. Both documents in each contract shall be critically reviewed and updated with view to the Detailed Design or updated designs. These requirements are important and should be observed, monitored, and reported from the inception phase on in all documents to be prepared by the consultant;
(iii) Inform the Contractor that relevant contract shall not commence prior to the Consultant's approval and satisfaction of appropriate measures in place to address ESHS risks and impacts;
(iv) Approve after due revision Contractor's SSEMPs and, during the execution of the works, instruct the Contractor to update the SSEMPs if it becomes necessary (e.g. due to unanticipated impacts, change in site, change in construction method etc.). The revised version shall highlight the new elements incorporated in the document;
(v) Supervise the Contractor's implementation of the EMPs and report quarterly on compliance of the Contractor with the EMP and ESHS Works Requirements (as provided in section 6 of bid document); This includes health and safety performance and conformance with labour and working condition standards in case of severe ESHS violations (and in particular OHS risks to life), the Consultant shall suspend the work at that stretch until the Contractor has rectified the situation;
(vi) Document Contractor's non-conformances. Review and approve the Contractor's proposals for remedial action/s and their timeframe for implementation. Follow up on correction/remediation.
(vii) Follow up on the results of any inspections or audits by labour, health and safety or environmental regulatory authorities.
(viii) Check if the Contractor provides instructions and trainings to workers, Subcontractors and Suppliers (in particular those for major supply items) to assure that they understand their respective ESHS requirements and that the Contractor complies with the Code of Conduct.
(ix) Advise the Contractor on the ESHS risks and impacts of any design change proposals and the implications for compliance with IEE, EMP, consent/permits and other relevant project requirements.
(x) Review the Contractor's monthly progress reports, and check if detected nonconformities are documented and analyzed and are addressed by corrective actions; Documentation shall include a digital photograph and with captions to

[72] As per TOR of PMDSC, section d. Environmental, Health and Safety, Gender, Social Resettlement and Participation.

provide a visual illustration, explicitly indicating the location, date of inspection and the non-conformity in question.

(xi) Follow-up on the resolution of any grievances in relation to ESHS.:

(xii) Inform the Employer on any ESHS related situation that might arise which could jeopardize the successful completion of the Project. Reflect such situations in the periodic reporting.

(xiii) Prepare and submit monthly, quarterly, and semi-annual safeguards monitoring report.

(xiv) Ensure that the GRM established for the project is in place and is working effectively. Ensure proper documentation and support in speedy redressal of grievances.

(xv) Observance of the Contractor's compliance with all contractual ESHS.

6. Contractors

456. According to Procurement Plan, three Contractors will implement the WSS sub-components:

(i) **Package WS01**: Djizzak City Bulk Water Supply System Improvements: rehabilitation of main pipeline;

(ii) **Package WS02**: Modernizing and Operational Efficiency Improvements in Djizzak: construction and rehabilitation of water supply and sewage networks;

(iii) **Package WS03**: Improving Hygiene and COVID-19 Pandemic Control Measures in Djizzak: Installation of Modern Hand Washing and Public Toilet Stations

457. Contractors will be responsible for EMP/SSEMP implementation during construction phase. Prior to commencing any physical works, SSEMPs including TSEMPs will be developed by the Contractors under the guidance of the PMSC and be endorsed by PMSC before submission to PIU for approval. The SSEMP is the document that the Contractors will prepare outlining how it intends to implement the EMP and ensure that all mitigation and monitoring measures are completed according to the implementation arrangements specified in this EMP. SSEMPs will be needed for major environmental issues and most critical sites relating to sensitive receptors.

458. During the Construction phase, each contractor must retain the expertise of a full-time environmental engineer and OHSE to prepare and update the SSEMP and to oversee and report on the SSEMP implementation throughout the contract period.

459. Contractor will be responsible for the implementation of some of Corrective Action Plan for existing facilities in Amir Timur and Sangar groundwater intakes (

460. **Table** 22).

7. Urban Governance & Institutional Strengthening Consultants (UGISC)

461. The objective of the UGISC is supporting MIFT, in achieving the project outputs of strengthening institutional capacity in areas of urban governance and urban services delivery including urban management, and water and sanitation; creating public awareness; strengthening financial and operational sustainability; introducing innovative and technology-driven approaches, implementing livelihood programs, and ensuring gender focus and social inclusion. The scope broadly includes (i) implementing an urban management and urban services capacity development program in the four municipalities, in areas of strategic planning and budgeting, municipal finance, asset management, O&M, e-governance, citizen participation, and private sector cooperation; (iii) implementing a water and sanitation capacity development program for Djizzak water utility; (iv) carrying out a Water Supply Operation Efficiency Improvement Program for Djizzak City; (v) designing and carrying out various awareness campaigns related to areas of intervention including recycling and waste

minimization for project communities and toza haduds, (vi) supporting skills and livelihood development in four project cities; and; (vii) targeted activities for integrating gender and social inclusion in urban governance and monitoring and implementing the gender action plan prepared for the project.

462. UGISC will assign water supply specialist and health and safety specialist. Below is a list of major tasks among others required for fully achieving the objective and scope as stated above related to environmental aspects:

(i) Develop and implement an intensive vocational training program for technical staff of Djizzak Suvtaminot, focusing on operating SCADA, GIS and conducting energy efficiency audits;

(ii) Develop a raw, drinking, and wastewater testing concept based on Hazard Analysis and Critical Control Points (HACPP), train laboratory staff, and preparing a drinking water safety plan for the city of Djizzak.

8. Local Coordination Committee

463. Local coordination committee comprised of project stakeholders will meet on a semi-annual basis (or as needed) to review project progress and ensure timely implementation.

9. Djizzak Suvtaminot LLC

464. Djizzak Suvtaminot LLC has a Health and Safety specialist who is in charge for ensure compliance with national environmental requirements during operation phase. This health and safety specialist will be in charge for implementation of mitigation measures indicated in EMP, responsible for in-time development and submission of environmental reports to the Statistical Committee of Uzbekistan and Djizzak branch SCEEP; obtaining and timely updating permissions on discharge wastewater, disposal of solid waste, special permission on water use as it is required by the national regulations. Djizzak Suvtaminot LLC will be responsible for the implementation of some of Corrective Action Plan for existing facilities in Amir Timur and Sangar groundwater intakes (

465. Table **22**).

10. SCEEP of Djizzak province

466. SCEEP of Djizzak province will be also involved in the process of project implementation and further operation. SCEEP reviewed three PEISs and issued Environmental Appraisals (para. 14 on page. 9). Based on the results of conducted national Environmental Impact Assessment, a list of mitigation measures and monitoring activities are indicated in an Environmental Appraisal. The requirements are mandatory for implementation during construction phase by the project owner. Inspectors from Djizzak branch of SCEEP will monitor implementation of the requirements indicated in the Environmental Appraisal. Representatives of the SCEEP will also participate in the hand-over process as member of State Acceptance Commission. SCEEP will review the SEC developed by the Djizzak Suvtaminot, and will approve the document (para. 40 on page 15).

11. Other entities

467. Other related to this subcomponent stakeholders including hokimiyats, Uzsuvtaminot Joint Stock Company, Djizzak Suvtaminot LLC, Djizzak branch of SCEEP, Agency responsible for waste collection and their disposal will be involved in evaluation process to ensure their active involvement during project implementation.

468. SEWPHS and UNICEF will assist UGISC in development and implementation capacity building program on water supply and sanitation component (para. 376 on page. 116).

469. The project institution structure is presented in the figure below.

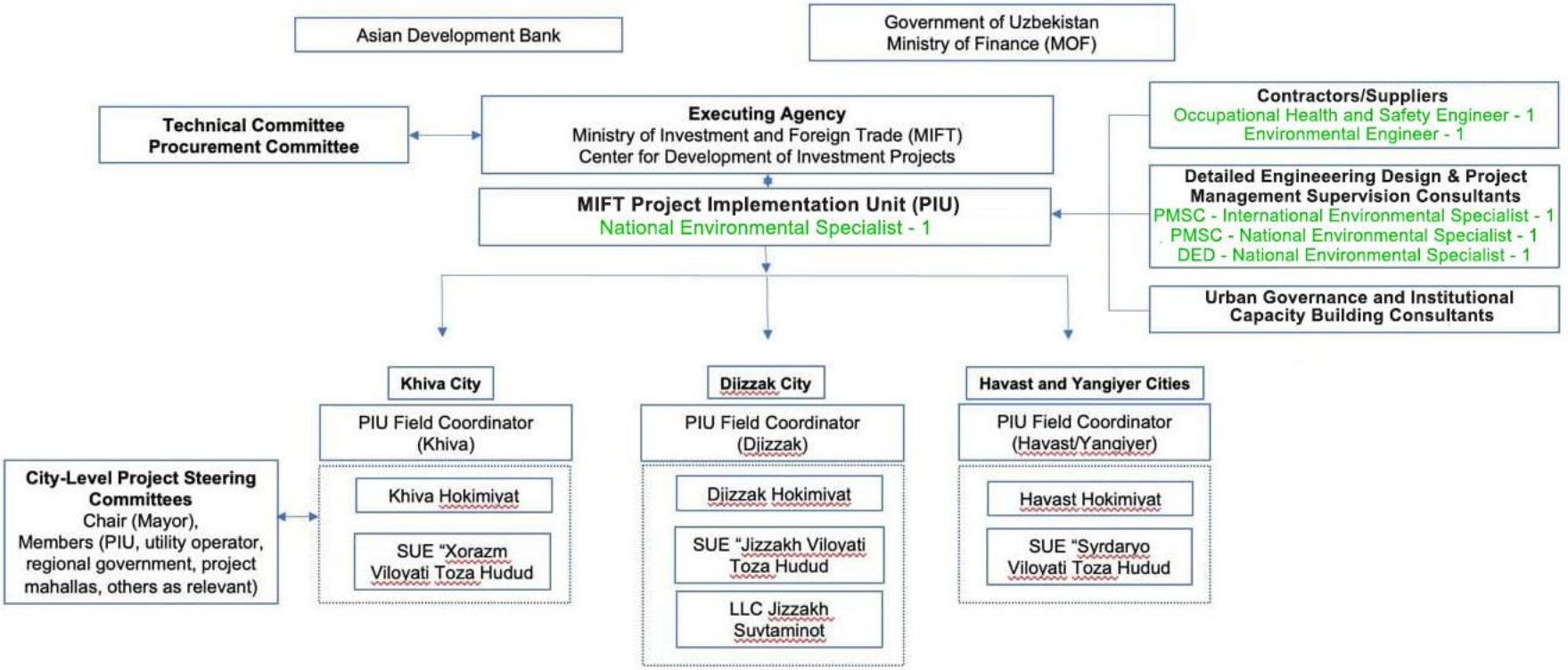


Figure 63: Project's institutional structure and environmental team

E. Capacity building activity

470. Capacity building for the project will be implemented with support of two Consulting firms (i) PMDSC (both DED Consultant and PMSC, footnote 2 and para. 450 on page 145), and (ii) UGISC (Chapter IX.D.7 on page 147). The Project's capacity building on environmental aspects will cover three main directions:

i) ***PIU's and Contractor capacity*** on EMP implementation during construction stage – to enhance PIU's capacity on the EMP implementation, PMSC-IES will provide respective training for PIU staff (including PIU-NES) and PIU Field Coordinators and further assistance in monitoring SSEMP implementation and guidelines for Contractor's environmental engineer and OHSE as required. In case of determining a presence of Asbestos materials in the demolishing buildings, PMSC-IES will support Contractor in developing ACMMP and will conduct separate training for handling and disposal of hazardous materials. Contractor's environmental engineer and OHSE with support of PMSC will also provide training to the workers on SSEMP implementation including occupational health and safety at least on monthly basis.;

ii) ***Djizzak Suvtaminot LLC capacity*** on overall environmental performance during the project operation – PMSC-IES, PMSC-NES and PIU-NES will develop and conduct training program on general compliance with national environmental requirements such as timely receiving necessary permission, monitoring of environmental performance (during operation) and preparation and submission of reports to respective national agencies and ADB etc. With support of UGISC, the project will support operational efficiency capacity trough implementation of the following activities: (i) training courses on organizational management, financial, asset and quality management for Djizzak Suvtaminot LLC; (ii) staff vocational training on use of SCADA, GIS and energy efficiency auditing, and on-the-job training on NRW management (leak detection, DMA management), preventive maintenance and emergency response, and modern financial management for targeted staff at Djizzak Suvtaminot LLC, and; (iii) development of a water safety plan, GRM, and performance based corporate business plan for Djizzak Suvtaminot LLC. During operation, Djizzak Suvtaminot LLC health and safety specialist will provide monthly training on (i) occupational health and safety to Djizzak Suvtaminot LLC staff; and (ii) handling and disposal of hazardous materials (bactericidal lamps) to Staff of existing and new water quality laboratories.

iii) ***Awareness program for population*** in the project area – the program will be implemented by the UGISC. Among other technical aspects, the UGISC will be responsible for development of educational materials, Hygiene awareness, and WASH+H programs will be undertaken in Ittifoq, Dustlik, and Yoshlik mahallas in coordination with SEWPHS and UNICEF, particularly related to those activities required to prevent the spread of COVID-19 and other pandemics (para. 376 on page. 116).

471. The tentative plan of required training is presented in **Table 39**.

Table 39: Tentative program of training

Training Agenda	Timing	Recipients	Organizer
For PIU and Contractor (para.470 i))			

Training Agenda	Timing	Recipients	Organizer
1. Overall EMP implementation, Environmental Monitoring Reports preparation	Prior to commencement of the civil works and refresh training regularly during construction phase	PIU staff including PIU-NES, Contractor workers	PMSC-IES (with PMSC-NES' support)
2. Handling and disposal of hazardous materials (asbestos)	Before starting works on building demolishing	Same as above	PMSC-IES
3. SSEMP implementation including occupational health and safety	Prior to commencement of the civil works and refresh training regularly (at least on monthly base) during construction phase	Contractor workers	Contractor's environmental engineer and OHSE with support of PMSC
For Djizzak Suvtaminot LLC (para.470 ii))			
4. On general compliance with national environmental requirements	Prior construction and prior commissioning	Contractors and Djizzak Suvtaminot	PMSC-NES (with PMSC-IES's support) and PIU-NES
5. Operational efficiency capacity building	Throughout the IUDP implementation	Djizzak Suvtaminot	UGISC
6. development of a water safety plan, GRM, and performance based corporate business plan for Djizzak Suvtaminot LLC.	During construction phase	Djizzak Suvtaminot LLC	PMSC-IES and PMSC-NES with UGISC's support
7. On occupational health and safety	Regularly (at least on monthly base) during operation period	respective Djizzak Suvtaminot LLC staff	Djizzak Suvtaminot LLC health and safety specialist
8. Handling and disposal of hazardous materials (bactericidal lamps)	Same as above.	Staff of existing and new water quality laboratories	Djizzak Suvtaminot LLC health and safety specialist
For Population (para.470 iii))			
9. training on WASH+H awareness program for population	During the project period every 6 months during 5 years in 3 mahallas	Population of the project area	UGISC in coordination with SEWPHS and UNICEF

EMP = Environmental Management Plan, OHSE = (Contractor's) Occupational Health and Safety Engineer, PIU = Project Implementation Unit, PIU-NES = PIU's National Environmental Specialist, PMSC = Project Management and Supervision Consultant, SSEMP = Site Specific Environmental Management Plan, UGISC = Urban Governance & Institutional Strengthening Consultants

F. Cost estimation for environmental management

472. Costs required for environmental management will cover the following activities:

(i) Implementation of mitigation measures by all parties as indicated in the EMP;
(ii) Payment for cutting trees and planting seedlings;
(iii) Environmental monitoring; and
(iv) Implementation of capacity building program.

473. Although some of the measures included in EMP are an integral part of the civil works (watering, storage of topsoil etc.), some measures (implementation of ACMMP, bio toilets etc.) require additional funds. Cost estimation for environmental management is presented in the

below tables. According to Procurement Plan, three Contractors will implement the WSS sub-components (para. 456 on page 147):

474. The construction period of all these contracts will be 12 months in total for each package. **Table 40** present cost divided by Contractors.

Table 40: Indicative Cost Estimate for Contractor's Environmental Management

Description	Unit	Quantity	Rate	Amount
Package WS01				
Expenses on planting new trees to compensate removed trees[73]	Lump sum	1	$7,000	$7,000
Installation of noise and dust protection screens	Lump sum	1	$10,000	$10,000
Environmental Engineer	month	12	$500	$6,000
Occupational Health and Safety Engineer (OHSE)	month	12	$500	$6,000
Installation of bio toilets	unit	8	$600	$4,800
Asbestos Management Facility[74]		1	$500	$500
Implementation of existing facilities' corrective actions (**Table 22**)	Lump	1	$700,500	$700,500
			Package WS01 Total	**$734,800**
Package WS02				
Expenses on planting new trees to compensate removed trees (footnote 73)	Lump sum	1	$7,000	$7,000
Installation of noise and dust protection screens	Lump sum	1	$10,000	$10,000
Environmental Engineer	month	12	$500	$6,000
Occupational Health and Safety Engineer (OHSE)	month	12	$500	$6,000
Installation of bio toilets	unit	8	$600	$4,800
Asbestos Management Facility (footnote 74)		1	$500	$500
			Package WS02 Total	**34,300**
Package WS03				
Expenses on planting new trees to compensate removed trees (footnote 73)	Lump sum	1	$7,000	$7,000
Installation of noise and dust protection screens	Lump sum	1	$10,000	$10,000
Environmental Engineer	month	12	$500	$6,000
Occupational Health and Safety Engineer (OHSE)	month	12	$500	$6,000
Installation of bio toilets	unit	2	$600	$1,200
			Package WS03 Total	**$30,200**

475. **Table 41** shows the cost estimate for the PMSC's environmental monitoring required for the WSS sub-components, while **Table 42** shows the cost for entire Project (WSS subcomponent, Urban Development Component and Solid Waste Management). Aside from this, DED Consultant (footnote 2) has 3 person-months of a National Environmental Specialist (para. 450 on page 145).

Table 41: Cost Estimate for the PMSC's Environmental Monitoring

Description	Unit	Quantity	Rate	Amount
Surface Water Quality	Sample	**32** (2 times/week x 2 weeks x 4 locations x 2 samples)	$50[75]	$1,600
Air Quality (SO_2, NO_2, CO)	Sample	**36** (1 time/week x 2 weeks x 18 locations x 1 sample)	$60[76]	$2,160
Dust measurement	Device	**1**	$2,000	$2,000
Noise measurement	Device	**4**	$400	$1,600
			Sub-Total	**$7,360**
			Contingencies (10%)	$736
			Total	**$8,096**

[73] In accordance with national regulation for each cut trees ten seedlings will be planted.
[74] Calculation based on Asbestos materials management plan developed for Kyrgyz Republic: Issyk-Kul Sustainable Development Project (2015)
[75] Unit rate was provided by ASEWPH.
[76] Unit rate was provided by ASEWPH.

Table 42: Cost Estimate for PMSC's IUDP Environmental Management

Description	Unit	Quantity	Rate	Amount
International Environmental Specialist (IES)	month	4	$15,400	$61,600
National Environmental Specialist (NES)	month	60	$2,500	$150,000
Environmental Monitoring				
WSS component				$8,096
Urban Development Component				$24,520
Solid Waste Management Component				$ 1,760
Trainings[77]				$0
			Sub-Total	**$245,976**
			Contingencies (10%)	**$24,598**
			Total	**$271,574**

PMSC = Project Management and Supervision Consultant, PMSC-IES = PMSC's International Environmental Specialist, PMSC-NES= PMSC's National Environmental Specialist, WSS = Water Supply and Sanitation

Table 43: Cost Estimate for the PIU's Environmental Management

Description	Unit	Quantity	Rate	Amount
National Environmental Safeguard Specialist	month	60	$1,200	$72,000
			Contingencies (10%)	**$7,200**
			Total	**$79,200**

476. The budget of a full-time Environmental, Health and Safety specialist in Djizzak Suvtaminot LLC is not included in the above tables.

[77] No additional cost is needed for trainings.

X. CONCLUSIONS AND RECOMMENDATIONS

477. The IEE has confirmed that the project will have environmental impacts limited within the project area, therefore, the project is Category B under ADB SPS.

478. The project will be implemented in a populated area, at remote distance from any protected areas. There are no species included in the RUz Red Book or the IUCN Red List in the project area.

479. The main types of anticipated impact will be: dust emissions, increased noise levels, waste generation. It is expected that non-hazardous wastes will be generated. The generation of hazardous wastes (such as asbestos) is possible during dismantling of several buildings in the process of the main pipe construction.

480. The most significant impact will be associated with public safety during replacement of the existing pipes and laying new ones inside the mahallas. To mitigate all identified impacts, SSEMP including TSEMPs in accordance with the EMP will be developed by the contractors.

481. To ensure complete implementation of the environmental requirements, it is necessary to conduct environmental monitoring, as indicated in the EMoP. If the monitoring results exceed the standards adopted in the document, additional mitigation measures will be implemented.

482. The project will not cause generation of any greenhouse gases. On the contrary, improved water accounting, replaced outdated pumps with more advanced ones will reduce energy consumption for water pumping and its conveyance to consumers.

483. In general, the project will have a significant positive social effect since it will provide population of the project mahallas with safe and reliable potable water supply. This, in turn, will improve the socioeconomic indicators, and sanitary and epidemiological situation. By installing the SCADA system, significant savings in water resources will be achieved along with their more efficient management.

484. For effective implementation of environmental management, it is important to strengthen the institutional capacity through recruitment of qualified environmental and health and safety officer/specialists by all project stakeholders.

485. PIU will ensure a proper functioning of the GRM established under the current IEE and discussed with various stakeholders during Public Consultations which will continue throughout the Project implementation. The Public Consultations will be conducted with due consideration of COVID-19 safety requirements.

486. During the entire project implementation and further operation, it is important to closely cooperate with the local communities, comply with all national environmental requirements, and conduct awareness program to ensure sustainable and safe operation of the WSS system.

487. Following requirements of ADB SPS, MIFT will apply pollution prevention and control technologies and practices consistent with international good practice as reflected in internationally recognized standards such as EHS Guidelines. When Government regulations differ from these levels and measures, MIFT will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, MIFT will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in ADB SPS.

488. This IEE will be updated if any unanticipated environmental impacts become apparent during implementation phase and will be submitted to ADB for approval and disclosure on the ADB's website.

Initial Environmental Examination

June 2022

Republic of Uzbekistan: Integrated Urban Development Project (Water Supply and Sanitation Subcomponent)

Volume II: Appendices

Prepared by Ministry of Investments and Foreign Trade of the Republic of Uzbekistan for the Asian Development Bank

LIST OF APPENDICES

APPENDIX 1. The Environmental Appraisal of State Environmental Expertise: Preliminary Environmental Impact Statement (PEIS)

Modernization of water supply networks of "Ittifoq, Dustlik and Yoshlik" mahallas in Djizzak city of Djizzak province

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

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DAVLAT EKOLOGIK EKSPERTIZASI XULOSASI

По объекту: Проект заявления о воздействии на окружающую среду (ЗВОС) для модернизации водопроводных сетей махалли «Иттифок, Дустлик и Ёшлик» г.Джизака Джизакской области.

Заказчик: **ООО "JIZZAX SUV TA'MINOTI"**

ИНН 200345016

Категория: **III**, п.7, ПКМ РУз №541 от 07.09.2020 г.

Разработчик: **ООО "PROEKT ECO SERVISE"**

Эксперт: Агламов Зиёвиддин Махмудович

Организация: ООО "JIZZAX SUV TA'MINOTI"

Руководитель: ZAKIR MAMARASULOV SHUKUROVICH

На ГУП «Центр государственной экологической экспертизы Джизакской области» представлены **повторно** доработанный согласно заключению Джизакгосэкоэкспертизы от 11.01.2022 года №8-Э материалы первого этапа оценки воздействия на окружающую среду (ЗВОС) модернизации водопроводных сетей махалли «Иттифок, Дустлик и Ёшлик» г.Джизака Джизакской области.

Основанием для разработки проекта ЗВОС послужили действующие законы «Положение о государственной экологической экспертизе в Республике Узбекистан», утвержденное ПКМ Республики Узбекистан за № 541 от 07.09.2020 г. В соответствии с приложением, объект экспертизы по видам деятельности отнесен к III категории воздействии на окружающую среду (низкий риск).

Целью работы является модернизации водопроводных сетей в махаллях «Иттифок», «Дустлик» и «Ёшлик» г.Джизака Джизакской области.

Проект предусматривает реконструкцию и строительство водоводов и водопроводных сетей, а так же организацию подключений к сети новых потребителей.

Протяженность водопроводных сетей для реконструкции приведены в нижеследующей:

- МСГ Дустлик протяженность магистральных сетей 13,0км, диаметром 50, 110, 160мм;

- МСГ Иттифок протяженность 4,5 км, диаметром 50,63,75,110,160,225мм;

- МСГ Ёшлик установка камер с ультразвуковыми счетчиками и регуляторами давления, для создания «районной зоны учета» – 1 шт;

- установка ультразвуковых счетчиков на ответвлениях – 3 шт;

- домовые вводы с установкой интеллектуальных счетчиков диаметром 20 мм – 38 шт. (протяженность и диаметр на 1 домовой ввод принять: труба полиэтиленовая 20мм, L=10м);

- установка поквартирных интеллектуальных счетчиков диаметром 15 мм – 1014 шт;

- установка обще домовых ультразвуковых счетчиков: для 2-ух этажных домов в колодце–18шт, для 4-х этажных домов – 19 шт.

В состав работ входит также организация переключения существующих подключений и строительство новых подключений к неподключенным индивидуальным домам. Расчетная длина одного подключения не более 25 м, диаметр - 24 мм, врезка обеспечивается отдельным колодцем с отсекающей задвижкой и водомерным счетчиком. Прокладка траншеи будет проводиться на глубину около 2 м и ширину 1 м.

Объём изымаего грунта составит 68250 т/год, учитывая плотность грунта – 1,95 т/м3.

Общая продолжительность реализации проекта составляет 260 рабочих дня. Численность рабочих персонала – 20 человек.

Источниками воздействия на окружающую среду при строительных работ являются следующие процессы:

– при прокладке траншеи и перемещение спецтехники;

– при хранении грунта;

– при засыпки траншеи;

– при пайке ПЭ труб.

Основными выбрасываемыми загрязняющими веществами при строительстве проектируемых объектов являются: оксид углерода, углеводороды, диоксид азота, диоксид серы, бенз(а)перен, сажа, пыль неорганическая, уксусная кислота.

Выброс загрязняющих веществ в атмосферу будет осуществляться от 4 неорганизованных источников выбросов в атмосферу. Суммарный выброс загрязняющих веществ, в атмосферный воздух, прогнозируемый за период строительства, составляет 7,3951662 т/год. Из них: оксид углерода – 3,559601 т/год, углеводороды – 1,0608 т/год, диоксид азота – 1,4144 т/год, диоксид серы – 0,54808 т/год, бенз(а)пирен – 0,3536 т/год, сажа – 0,0113152 т/год, пыль неорганическая – 0,39237 т/год, уксусная кислота – 0,055 т/год. Жидкие и газообразные вещества составят – 6,991481 т/год, твёрдые вещества – 0,4036852 т/год. Таким образом, большую часть выбросов составляют жидких и газообразных вещества.

Выбросы вредных веществ, образующиеся в процессе строительных работ, носят кратковременный характер и не приведут к изменению сложившихся фоновых концентраций загрязняющих веществ в атмосферном воздухе участка по окончании строительства. Концентрации загрязняющих веществ в атмосферном воздухе на границе объекта не превысят квот, установленных Госкомитетом РУз по экологии и охране окружающей среды.

Залповые выбросы на рассматриваемой территории отсутствуют. Возможность возникновения аварийных выбросов вредных веществ в атмосферный воздух исключена.

Водопотребления для хозпитьевых, хозбытовых нужд и пылеподавления решается за счет привозной воды. Для жителей вода будет решаться с помощью имеющей водопроводной сети. Общая потребность в воде составляет 1995435,0 м3/год.

Сброс стоков с территории объекта будет осуществляться в выгребную яму 10 м3, и по мере накопления стоки вывозиться на ближайшие очистные сооружения.

В период строительства водопроводных сетей образуется 4 видов (ТБО, обтирочная вотошь, обрезки труб ПЭ, изымаемый грунт) отходов в количестве 68256,49 т/год.

Для хранения ТБО и обтирочной ветоши, предусмотрена специальные металлические контейнеры. Отходы вывозятся на полигоны твёрдых бытовых отходов.

Отходы от резки ПЭ труб собирается в отведенном месте, затем сдаются предприятиям по переработке полимера. Отходы в виде грунта вывозятся на дорожно-ремонтные предприятия района для посыпки проектируемых дорог.

Ремонт, заправка автостроительной техники будет осуществляться на спец. предприятиях, поэтому на территории строй площадки отходы ремонта оборудования и случайного пролива нефтепродукта не образуются.

Все виды отходов, при выполнении условий их сбора и складирования, не будут оказывать вредного воздействия на окружающую среду.

Таким образом, работа данного объекта не приведет к негативным последствиям природной среды и здоровья населения.

Изложенные в заключение от 05.01.2022 года №8-Э замечания по качеству подготовки проекта ЗВОС устранены.

Из вышеуказанного Джизакское областное управление по экологии и охране окружающей среды **СОГЛАСОВЫВАЕТ** проект заявления о воздействии на окружающую среду (ЗВОС) для модернизации водопроводных сетей махалли «Иттифок, Дустлик и Ёшлик» г.Джизака Джизакской области.

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.

Заказчику необходимо выполнить все природоохранные мероприятия, изложенные в проекте ЗВОС и в данном заключении Госэкоэкспертизы, оформить в надлежащем порядке с ООО «Тоза худуд» соответствующие договора на вывоз отходов в специальные места и на вывоз хозяйственно-фекальных стоков на ближайшее очистные сооружения, 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 г.Джизака необходимо осуществлять контроль выполнения предложенных природоохранных мероприятий и требований.

М.П. Начальник управления **Э.Холматов.**

Исп: З.Агламов

Тел: (78) 771-69-49

Хулоса рақами 75-Э

Хулоса санаси 25.02.2022

Текшириш учун

Ҳужжат рақами: 20322

Текшириш учун пароль: 35659

Reconstruction of the water pipeline from the Amir Temur water intake facilities to the Red Bridge on the territory of Djizzak city, Djizzak province

O'ZBEKISTON RESPUBLIKASI EKOLOGIYA VA ATROF-MUHITNI MUHOFAZA QILISH DAVLAT QO'MITASI
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DAVLAT EKOLOGIK EKSPERTIZASI XULOSASI

По объекту:	Проект заявления о воздействии на окружающую среду (ЗВОС) для реконструкции водовода от водозаборных сооружений Амир Темур до Красного моста на территории г.Джизака Джизакской области.
Заказчик:	**ООО "JIZZAX SUV TA'MINOTI"**
ИНН	200345016
Категория:	III, п.7, ПКМ РУз №541 от 07.09.2020 г.
Разработчик:	**ООО "PROEKT ECO SERVISE"**
Эксперт:	Агламов Зиёвиддин Махмудович

Организация:	ООО "JIZZAX SUV TA'MINOTI"
Руководитель:	ZAKIR MAMARASULOV SHUKUROVICH

На ГУП «Центр государственной экологической экспертизы Джизакской области» представлены **повторно** доработанный согласно заключению Джизакгосэкоэкспертизы от 08.02.2022 года №52-Э материалы первого этапа оценки воздействия на окружающую среду (ЗВОС) для реконструкции водовода от водозаборных сооружений Амир Темур до Красного моста на территории г.Джизака Джизакской области.

Основанием для разработки проекта ЗВОС послужили действующие законы «Положение о государственной экологической экспертизе в Республике Узбекистан», утвержденное ПКМ Республики Узбекистан за № 541 от 07.09.2020 г. В соответствии с приложением, объект экспертизы по видам деятельности отнесен к III категории воздействии на окружающую среду (низкий риск).

По проекту, рассматриваемая строительства и реконструкция водовода из стальных труб с внутренней и внешней заводской изоляцией от водозаборных сооружений Амир Темур до города Джизак (Красный мост)
общей протяженностью 12,5 км Ø 600-700 мм с установкой всей необходимой запорной и регулирующей арматуры. Прокладка траншеи будет проводиться на глубину около 2 м и ширину 1 м.

Водовод из стальных труб был построен в 1989 году и в настоящее время нуждается в замене.

По трассе водовода имеются поселки, подключены к существующему водоводу.

От подземного водозабора «Амир Темур» вода подается по водоводу диаметром 600мм, после подключения водозабора «Санзар» вода по водоводу диаметром 700 мм подается частично в сети города Джизака, частично на распределительный центр водозабора «Узбекистан».

От распределительного центра водозабора «Узбекистан» насосной станцией II подъема вода также подается в распределительную сеть города. В свою очередь на водозаборе «Узбекистан» также имеются скважины, подающие воду в резервуары чистой воды распределительного центра.

Подающий водовод от водозабора Амир Темур до водозабора Санзар, и от водозабора Санзар до города Джизака (точка подключения к распределительной системе города Джизака) принят из стальных труб согласно решению Протокола технического совещания по обсуждению объемов работ, предусмотренных проектом АБР «Финансирование подготовки градостроительных проектов» от 30 марта 2021 года.

Диаметр водовода рассчитан на подачу расхода от водозабора Амир Тимур в количестве 30 тыс. м3/сут, от водозабора Санзар в количестве 10 тыс. м3/сут. В качестве сборного водовода от скважин водозабора Амир Темур принято использование существующего водовода с последующим его подключением к трассе проектного водовода.

Протяженность водовода составляет:

- водовод от водозабора Амир Тимур до водозабора Санзар диаметром 600 мм – 9,4 км;

- водовод от точки подключения к водозабору Санзар диаметром 700 мм – 3,1 км.

Для защиты от гидравлического удара проектом предусматривается установка предохранительных клапанов по трассе водовода. Диаметры предохранительных клапанов приняты согласно рекомендациям заводов изготовителей (для водовода диаметром 600мм- 150 мм, для водовода диаметром 700мм - 200мм). На водоводе установлены два предохранительных клапана до точки подключения к водозабору Санзар и один предохранительный клапан в конце трассы на точке подключения к распределительным сетям города Джизака (см. схему работы водовода Амир Темур- Санзар-Джизак). Предохранительные клапаны устанавливаются на отводе к основному трубопроводу. Эффект гашения гидравлического удара достигается за счет перепуска потока среды в момент гидроудара. При гидроударе клапан мгновенно открывается и обеспечивает большую пропускную способность, после чего медленно закрывается, не создавая скачков давления среды. Сброс воды осуществляется на рельеф или в ближайший водоток (место сброса решается при разработке рабочего проекта).

В повышенных переломных точках профиля на воздухосборниках устанавливаются вантузы для удаления воздуха. По рекомендациям поставщиков оборудования для водовода диаметром 600мм устанавливаются вантузы диаметром 100 мм, для водовода диаметром 700мм - 150мм. Вантузы работают в автоматическом режиме, по конструкции предусматриваются двухступенчатые вантузы (при диаметре труб свыше 300мм). Для выделения ремонтных участков предусматриваются ремонтные задвижки, длина ремонтного участка в соответствии с КМК 2.04.02-97 пункт 8.10 принимается не более 3 км. В пониженных точках каждого ремонтного участка предусматриваются выпуски для опорожнения.

Для снижения давления по трассе водовода предусматривается установка регулятора давления «после себя». Также проектом предусматривается установка регулятора давления на подключении сборной линии от водозабора Санзар для обеспечения работы водозабора и исключения противодавления от водовода водозабора Амир Тимур. Диаметр регулятора давления 300мм определен в соответствии с рекомендациями поставщиков оборудования.

Для подключения поселков, расположенных по трассе водовода, предусматриваются врезки с устройством узлов подключений - камер с отключающими затворами и установленными ультразвуковыми водомерами.

Всего предусмотрено 7 узлов подключений. Диаметры подключений определены в зависимости от расхода и составляют 50, 80, 100мм. Проектом предусмотрены 2 перехода через автомобильную дорогу методом продавливания и один переход через реку Санзар.

Укладка водопроводных труб должна производиться с помощью машин, оборудованных специальными устройствами и приспособлениями (барабаном реверс-машины, реверсивной головкой, валиками, баком для воды, скоростным парогенератором, электрогенератором и распределительным устройством).

Использование таких технологических схем предполагает сборку водовода непосредственно в котловане. При этом применяют трубы длиной, определяемой условиями промышленного изготовления. В котлован (траншею) трубы (секции труб) подаются с помощью подъемного крана, автокрана, трубоукладчика и т. д. в зависимости от их массы.

В местах пересечения труб с существующими сетями водопровода, канализация, линиями связи и т.д. разработку грунта вести в ручную по 2 м в каждую сторону.

Монтаж производится сваркой встык. Используется, чтобы состыковать трубы большого диаметра.

Кроме того, проектом предусматривается устройство электрохимической защиты проектируемого стального водовода.

Общая продолжительность реализации проекта составляет 260 рабочих дней. Численность персонала – 20 человек. Жилой поселок представлен одноэтажными жилыми домами типового показательного массива, преимущественно местного типа. Ближайшие жилые дома находятся от границы объекта на удалении 100-200м.

Источниками воздействия на окружающую среду при реконструкции водовода от водозаборных сооружений Амир Темур до Красного моста, являются следующие процессы:

– при прокладке траншеи и перемещение спецтехники;

– при хранении грунта;

– при засыпки грунта;

– при сварочных работ.

Основными выбрасываемыми загрязняющими веществами при реконструкции являются: оксид углерода, углеводороды, диоксид азота, диоксид серы, бенз(а)перен, сажа, пыль неорганическая, оксид железа и диоксид марганца.

Выброс загрязняющих веществ в атмосферу будет осуществляться от 4 неорганизованных источников выбросов в атмосферу. Суммарный выброс загрязняющих веществ, в атмосферный воздух, прогнозируемый за период строительства, составляет 7,3070612 т/год. Из них: оксид углерода –3,536 т/год, углеводороды – 1,0608 т/год, диоксид азота – 1,4144 т/год, диоксид серы – 0,54808 т/год, бенз(а)пирен – 0,3536 т/год, сажа – 0,0000112 т/год, пыль неорганическая – 0,39237 т/год, оксид железа – 0,001623 т/год, диоксид марганца - 0,000177 т/год. Жидкие и газообразные вещества составят – 6,91468 т/год, твёрдые вещества – 0,3923812 т/год. Таким образом, большую часть выбросов составляют жидкие и газообразные вещества.

Выбросы вредных веществ, образующиеся в процессе строительных работ, носят кратковременный характер и не приведут к изменению сложившихся фоновых концентраций загрязняющих веществ в атмосферном воздухе участка по окончании строительства. Концентрации загрязняющих веществ в атмосферном воздухе на границе объекта не превысят квот, установленных Госкомитетом РУз по экологии и охране окружающей среды.

Залповые выбросы на рассматриваемой территории отсутствуют. Возможность возникновения аварийных выбросов вредных веществ в атмосферный воздух исключена.

Водопотребления для хозпитьевых нужд и пылеподавления решается за счет привозной воды. Общая потребность в воде составляет 32130,0 м3/год.

Сброс стоков с территории объекта будет осуществляться в выгребную яму 5м3, и по мере накопления стоки вывозиться на ближайшие очистные сооружения.

В период строительства водопроводных сетей образуется 5 видов (ТБО, обтирочная ветошь, огарки сварочных электродов, резка металла, изымаемый грунт) отходов в количестве 40006,58 т/год.

Для хранения ТБО, обтирочной ветоши и огарки сварочных электродов предусмотрено специальные металлические контейнеры. Отходы вывозятся на полигоны твёрдых бытовых отходов.

Отходы от резки металлов, собирается в отведенном месте, затем сдается в «Вторчермет». Отходы в виде грунта вывозятся на дорожно-ремонтные предприятия района для посыпки проектируемых дорог.

Ремонт, заправка автостроительной техники будет осуществляться на спец. предприятиях, поэтому на территории строй площадки отходы ремонта оборудования и случайного пролива нефтепродукта не образуются.

Все виды отходов, при выполнении условий их сбора и складирования, не будут оказывать вредного воздействия на окружающую среду.

Таким образом, работа данного объекта не приведет к негативным последствиям природной среды и здоровья населения.

Изложенные в заключение от 08.02.2022 года №52-Э замечания по качеству подготовки проекта ЗВОС устранены.

Из вышеуказанного Джизакское областное управление по экологии и охране окружающей среды **СОГЛАСОВЫВАЕТ** проект заявления о воздействии на окружающую среду (ЗВОС) для реконструкции водовода от водозаборных сооружений Амир Темур до Красного моста на территории г.Джизака Джизакской области.

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.

Заказчику необходимо выполнить все природоохранные мероприятия, изложенные в проекте ЗВОС и в данном заключении Госэкоэкспертизы, оформить в надлежащем порядке с ООО «Тоза худуд» соответствующие договора на вывоз отходов в специальные места и на вывоз хозяйственно-фекальных стоков на ближайшее очистные сооружения, 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 г.Джизака необходимо осуществлять контроль выполнения предложенных природоохранных мероприятий и требований.

М.П. Начальник управления **Э.Холматов.**

Исп: З.Агламов

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Хулоса рақами 78-Э

Хулоса санаси 01.03.2022

Текшириш учун

Ҳужжат рақами: 20320

Текшириш учун пароль: 07652

Modernization of the sewerage systems of the "Dustlik" mahalla in Djizzak city in Djizzak province

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

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DAVLAT EKOLOGIK EKSPERTIZASI XULOSASI

По объекту: Проект заявления о воздействии на окружающую среду (ЗВОС) для модернизации систем канализации махалли «Дустлик» г.Джизака Джизакской области.

Заказчик: **ООО "JIZZAX SUV TA'MINOTI"**

ИНН 200345016

Категория: III, п.15, ПКМ РУз №541 от 07.09.2020 г.

Разработчик: **ООО "PROEKT ECO SERVISE"**

Эксперт: Агламов Зиёвиддин Махмудович

Организация: ООО "JIZZAX SUV TA'MINOTI"

Руководитель: ZAKIR MAMARASULOV SHUKUROVICH

На ГУП «Центр государственной экологической экспертизы Джизакской области» представлены **повторно** доработанный согласно заключению Джизакгосэкоэкспертизы от 11.01.2022 года №9-Э материалы первого этапа оценки воздействия на окружающую среду (ЗВОС) для модернизации систем канализации махалли «Дустлик» г.Джизака Джизакской области.

Основанием для разработки проекта ЗВОС послужили действующие законы «Положение о государственной экологической экспертизе в Республике Узбекистан», утвержденное ПКМ Республики Узбекистан за № 541 от 07.09.2020 г. В соответствии с приложением, объект экспертизы по видам деятельности отнесен к III категории воздействии на окружающую среду (низкий риск).

Целью работы является оценка воздействия на окружающую среду (ЗВОС) при Модернизации системы канализации протяженностью 62,52 км на территории махалли «Дустлик» г. Джизак.

В настоящее время на МСГ «Дустлик» который расположен в городе Джизак реализуется проект АБР «Развитие системы санитарии Джизака», который предусматривается:

- замена 16,75 км и строительство 45,77 км канализационных сетей (всего 62,52 км.

Новая площадка очистных сооружений расположена к северу от города Джизак - в 5 км от города. Граница, недалеко от Учтепинского райцентра. Площадь участка около 28 га. Для махалли «Дустлик» проектом предусматривается строительство сетей канализации с учетом имеющихся подключений к существующей сети. По территории махалли проходят два самотечных коллектора (диаметром 1000мм и диаметром 600мм), которые в настоящее время находятся частично под жилой застройкой, частично проходят на частной территории домохозяйств. По согласованию с «Узсувтаъминот» проектом принята перекладка существующего коллектора диаметром 600мм.

Прокладка трубопровода предполагает формирование траншеи с определенными особенностями. Дно должно быть выровнено, при этом следует обеспечить уклон, который составляет 2 см на погонный метр трубопровода. Грунт на дне хорошо уплотняется, на него укладывается подушка из гравия и песка толщиной в пределах 15 см. Подушку следует утрамбовать на участке, который располагается за 2 м до смотрового колодца. Уплотнению подлежат и те зоны, где трубопровод соединяется с входной трубой. Приямки находятся там, где в системе будут раструбы.

Трубы располагаются раструбом вниз. Для соединения двух изделий раструб первой и гладкий конец другой необходимо очистить. Места соединения обрабатываются специальными составами. Трубу необходимо вставить до упора в раструб. По такой же технологии соединяются все элементы трубопровода. Для того чтобы соединение было качественным и надежным, необходимо измерить глубину, на которую одно изделие входит в другое, после наносится отметка. Если в фундаменте имеется выход, раструб системы следует подвести к нему. При необходимости устройства поворотов нужно применить отводы на 15, 30 или 45°. Когда длина трубопровода превышает 15 м, на участках устанавливается ревизия.

После завершения монтажа необходимо проверить угол наклона. Если все рекомендации соблюдены, то траншея засыпается, для этого можно использовать почву, вынутую при выкапывании. Однако из неё необходимо удалить камни и разбить плотные глыбы. При обратной засыпке в грунте не должно быть крупных камней, размер которых превышает 30 см. Траншею нужно засыпать на высоту в 0,3 м. При этом толщина слоев составляет 5 см. Каждый из них хорошо уплотняется по бокам, а место над трубой утрамбовывать не следует. Укладка труб должна производиться с помощью машин, оборудованных специальными устройствами и приспособлениями (барабаном реверс-машины, реверсивной головкой, валиками, баком для воды, скоростным парогенератором, электрогенератором и распределительным устройством).

Использование технологических схем предполагает сборку ПВХ непосредственно в котловане. При этом применяют трубы длиной, определяемой условиями промышленного изготовления. В котлован (траншею) трубы (секции труб) подаются с помощью подъемного крана, автокрана, трубоукладчика и т. д. в зависимости от их массы.

Сварка выступает в качестве основного средства соединения элементов при укладке трубопровода. Получение неразъемных соединений, исключающих внесение изменений в конструкцию, является чрезвычайно удобным при траншейной укладке. Полиэтиленовый трубопровод может укладываться трассовым методом, предполагающим предварительное сваривание секций до размера, допускающего транспортировку. Окончательное соединение производится уже на месте. Используемая при строительстве канализационных сетей техника будет принадлежать подрядным организациям. На разных этапах строительства будет применяться разное количество видов техники. Техника будет работать на 3-х площадках: в начале, середине и конце участка. Вся техника будет работать попеременно, выполняя свои функции.

По предварительной оценке, будет проложено (заменено) не менее 62,52 км (62520м) распределительных канализационных сетей Ø 600 мм. Прокладка траншеи будет проводиться на глубину около 2 м и ширину 1,0м, плотность грунта 1,95м3. Объем изымаемо грунта составит 243828 т/год.

Общая продолжительность реализации проекта составляет 260 рабочих дней.
Численность персонала – 20 человек, из них: 20 чел. рабочих.

Источниками воздействия на окружающую среду при строительных работ являются следующие процессы:

– при прокладке траншеи и перемещение спецтехники;

– при хранении грунта;

– при засыпки траншеи;

– электросварочные работы;

– при пайке ПЭ труб.

Основными выбрасываемыми загрязняющими веществами при строительстве проектируемых объектов являются: оксид углерода, углеводороды, диоксид азота, диоксид серы, бенз(а)перен, сажа, пыль неорганическая, оксид железа, диоксид марганца, винил хлористый сивнец..

Выброс загрязняющих веществ в атмосферу будет осуществляться от 5 неорганизованных источников выбросов в атмосферу. Суммарный выброс загрязняющих веществ, в атмосферный воздух, прогнозируемый за период строительства, составляет 7,352406 т/год. Из них: оксид углерода – 3,563 т/год, углеводороды – 1,0608 т/год, диоксид азота – 1,4144 т/год, диоксид серы – 0,54808 т/год, бенз(а)пирен – 0,3536 т/год, сажа – 0,0113152 т/год, пыль неорганическая – 0,392371 т/год, оксид железа – 0,005626 т/год, диоксид марганца – 0,0006136 т/год, винил хлористый – 0,002 т/год; свинец – 0,0006 т/год. Жидкие и газообразные вещества составят – 6,9487198 т/год, твёрдые вещества – 0,403682 т/год. Таким образом, большую часть выбросов составляют жидких и газообразных вещества.

Выбросы вредных веществ, образующиеся в процессе строительных работ, носят кратковременный характер и не приведут к изменению сложившихся фоновых концентраций загрязняющих веществ в атмосферном воздухе участка по окончании строительства. Концентрации загрязняющих веществ в атмосферном воздухе на границе объекта не превысят квот, установленных Госкомитетом РУз по экологии и охране окружающей среды.

Залповые выбросы на рассматриваемой территории отсутствуют. Возможность возникновения аварийных выбросов вредных веществ в атмосферный воздух исключена.

Водопотребления для хозпитьевых, хозбытовых нужд и пылеподавления решается за счет привозной воды. Для жителей вода будет решаться с помощью имеющей водопроводной сети. Общая потребность в воде составляет 195062,0 м3/год.

Сброс стоков с территории объекта будет осуществляться в выгребную яму 5 м3, и по мере накопления стоки вывозиться на ближайшие очистные сооружения.

В период строительства водопроводных сетей образуется 6 видов (ТБО, обтирочная вотошь, сварочные электроды, обрезки труб ПЭ, изымаемый грунт) отходов в количестве 243841,7 т/год.

Для хранения ТБО, обтирочной ветоши и огарки сварочных электродов, предусмотрено специальные металлические контейнеры. Отходы вывозятся на полигоны твёрдых бытовых отходов.

Отходы от резки металла, собирается в отведенном месте, затем сдаются в «Вторчермет» как металлолом. Отходы от резки ПЭ труб собирается в отведенном месте, затем сдаются предприятиям по переработке полимера. Отходы в виде грунта вывозятся на дорожно-ремонтные предприятия района для посыпки проектируемых дорог.

Ремонт, заправка автостроительной техники будет осуществляться на спец. предприятиях, поэтому на территории строй площадки отходы ремонта оборудования и случайного пролива нефтепродукта не образуются.

Все виды отходов, при выполнении условий их сбора и складирования, не будут оказывать вредного воздействия на окружающую среду.

Таким образом, работа данного объекта не приведет к негативным последствиям природной среды и здоровья населения.

Изложенные в заключение от 05.01.2022 года №9-Э замечания по качеству подготовки проекта ЗВОС устранены.

Из вышеуказанного Джизакское областное управление по экологии и охране окружающей среды **СОГЛАСОВЫВАЕТ** проект заявления о воздействии на окружающую среду (ЗВОС) для модернизации систем канализации махалли «Дустлик» г.Джизака Джизакской области Джизакской области.

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.

Заказчику необходимо выполнить все природоохранные мероприятия, изложенные в проекте ЗВОС и в данном заключении Госэкоэкспертизы, оформить в надлежащем порядке с ООО «Тоза худуд» соответствующие договора на вывоз отходов в специальные места и на вывоз хозяйственно-фекальных стоков на ближайшее очистные сооружения, 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 г.Джизака необходимо осуществлять контроль выполнения предложенных природоохранных мероприятий и требований.

М.П. Начальник управления **Э.Холматов.**

Исп: З.Агламов

Тел: (78) 771-69-49

Хулоса рақами 76-Э

Хулоса санаси 25.02.2022

Текшириш учун

Ҳужжат рақами: 20372

Текшириш учун пароль: 04496

APPENDIX 2. Permission on water use during construction phase

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Jizzax gidrogeologiya stansiyasi

№ 9708-4362-68d1-f661-5800-9480-9339
Hujjat yaratilingan sana: 2022-04-27
Ariza raqami: 50900269

Hujjat berilgan: "JIZZAX SUV TA'MINOTI" MAS'ULIYATI CHEKLANGAN JAMIYAT
Qabul qiluvchining identifikatsiya raqami: 200345016

Yer osti suvlaridan maxsus foydalanush yoki maxsus iste'mol qilish uchun

RUXSATNOMA

GZ-00029

1. Ushbu ruxsatnoma "JIZZAX SUV TA'MINOTI" MAS'ULIYATI CHEKLANGAN JAMIYAT ga Jizzax viloyati Jizzax TOSHLOQ MFY SH.RASHIDOV KO'CHASI 115 UY da joylashgan suv olish ob'yektidan Aholi is'temoli uchun maqsadlarda yer osti suvlaridan (suvdan foydalanish maqsadlari) maxsus foydalanish yoki maxsus iste'mol qilish uchun berildi

2. Pochta manzili, telefon raqami, faks, electron pochtasi, STIR raqami "JIZZAX SUV TA'MINOTI" MCHJ STIR 200345016, Tel. 72 226 0627

3. Suv olish maqsadlariga qarab tavsiflar Suvdan oqilona foydalanish kerak

4. Yillik suv olish hajmi 11 664 000ming kub/m mimg.m3/yil.

5. Suv olish obyektlari turi (burg'i qudug'i, buloq va boshqalar) va ularning soni: Artezian quduq ellik to'qqiz dona

6. Boshqa suvdan foydalanuvchiga yoki iste'molchisiga berilgan suvning hajmi (m3/kun, ming.m3/yil) Yo'q

7. Suv olish obyektlarida suv o'lchovchi asboblarning o'rnatilganligi (turi va markasi) va texnik holati to'g'risida ma'lumotlar Yo'q

8. Suv olish obyektlari va ularning atrofida sanitariya-muhofaza zonalari mavjudligi va holati Yo'q

9. Aylanma (ikkilamchi) suv iste'moli va suvdan foydalanish bo'yicha ma'lumotlar Yo'q

10. Ruxsatnomaning amal qilish muddati 27.04.2027 gacha.

OSTANOV FARRUX ERKIN O'G'LI

Mazkur hujjat Vazirlar Mahkamasining 2017 yil 15 sentyabrdagi 728-son qaroriga muvofiq Yagona interaktiv davlat xizmatlari portalida shakllantirilgan elektron hujjatning nusxasi bo'lib, davlat organlari tomonidan ushbu hujjatni qabul qilishni rad etishlari qat'iyan taqiqlanadi. Hujjat haqiqiyligini repo.gov.uz veb-saytida hujjatning noyob raqamini kiritib yoki mobil telefon yordamida QR- kodni skaner qilish orqali tekshirish mumkin.

5881

Translation:

Permission on special Water use for drinking purposes

Issued by Djizzak Hydrogeology station

Date of issuing: 27 April 2022

Name and Address: Jizzakh Suvtaminot

Volume of permitted water: 11 664 000 m^3/year

Purpose: Drinking water supply

Type of water sources: Artesian ground water wells (59 units)

Supply to other water users: No

Water recycling: No

Permission valid until 27 April 2027

APPENDIX 3. Sample of Asbestos-Containing Materials Management Plan

Asbestos-Containing Materials Management Plan

The Asbestos-Containing Materials Management Plan (ACMMP) describes and evaluates the risk of contractors (and others) encountering asbestos-containing material (ACM) at the Project construction sites during the implementation stage of the project; and it provides a procedure for dealing quickly and safely with any ACM that may be found.

The ADB *Safeguard Policy Statement* (SPS) requires that ADB-funded projects apply pollution prevention and control technologies and health and safety measures that are consistent with international good practice, as reflected in international standards such as the IFC/World Bank *Environmental, Health and Safety General Guidelines* (2007). If national legislation differs from these standards, the borrower is required to achieve whichever is more stringent. There is national procedure Sanitarian Norms and Rules (SNR) of RUz # 0300-11 dated from 2011 "Organization of collection, inventory, classification, disposal, storage and recycling of industrial waste in the conditions of Uzbekistan" covering disposal of ACM[1] in Uzbekistan. However, the procedure does provide clear description of handling ACM, therefore, the ACMMP follows the World Bank Guidelines.
The main principles of the ACMMP are as follows:

A. Prompt recognition of ACM;

B. Prompt and effective action to contain and deal appropriately with the ACM (including safe management and disposal); and

C. Maintaining the safety of site personnel and the general public at all times.

The ACMMP is designed for use by the Project's Project Implementation Unit (PIU) to manage the ACM risk over the project as a whole, and by contractors to deal efficiently with any ACM they or their workers encounter. The procedural element of the ACMMP is therefore designed to provide straightforward instructions that can be easily and quickly understood without the need for specialist knowledge and without referring to other sources.

PROTOCOL FOR HANDLING AND DISPOSAL OF ACM AT IUDP SITES

A. Source

This protocol was developed from guidance given by the UK Health and Safety Executive (HSE), which complies with European Union (EU) legislation and the UK *Control of Asbestos Regulations* (2012). For further information see the HSE website: http://www.hse.gov.uk/asbestos/essentials/[2]

B. Applicability

The Project ACMMP applies to all project construction sites and any related areas (eg workshops, parking lots, storage or disposal areas, etc. used by Project contractors). Contractors employed by Project are legally responsible for their construction sites and related areas and must follow the provisions of the Project ACMMP within those locations. Specifically, this protocol must be used to ensure the safe handling, removal and disposal of any and all ACM from those areas.

[1] Uzbek Sanitary Norms SanPiN 0233-07 "National standards "Sanitarian Norms and Rules on Work Hygiene and Environment Protection during production and usage of ACM" was one of a number of pieces of legislation deregulated in the 1980's. Notwithstanding their lack of legal status, as the most recently-available local standard, the regulations were referred to in preparing the ACMMP and the protocol for handling and disposal of ACM (see Section 3) incorporates soil covering requirements from the SanPin.

[2] ADB's Good Practice Guidance for the Management and Control of Asbestos: Protecting Workplaces and Communities from Asbestos Exposure Risks (Mar 2022) <Good Practice Guidance for the Management and Control of Asbestos: Protecting Workplaces and Communities from Asbestos Exposure Risks | Asian Development Bank (adb.org)> will also be referred when the ACMMP is prepared.

C. Immediate Action

On discovering ACM on the Project site, the Contractor must:

a) Stop all work within a 5 m radius of the ACM and evacuate all personnel from this area;

b) Delimit the 5 m radius with secure fencing posts, warning tape and easily visible signs warning of the presence of asbestos;

c) If the site is in an inhabited area, place a security guard at the edge of the site with instructions to keep the general public away;

d) Notify the Project Management and Design Supervision Consultant (PM&DSC) and Environmental Supervisors and arrange an immediate site inspection; also notify the PIU.

The PIU must:

e) Notify the Territorial Department of the State Sanitary Epidemiological Service.

D. Equipment

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

a) Warning tape, sturdy fence posts and warning notices;

b) Shovels;

c) Water supply and hose, fitted with a garden-type spray attachment;

d) Bucket of water and rags;

e) Sacks of clear, strong polythene that can be tied to close;

f) Asbestos waste containers (empty, clean, sealable metal drums, clearly labelled as containing asbestos).

E. Personal Protective Equipment (PPE)

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

g) Disposable overalls fitted with a hood;

h) Boots without laces;

i) New, strong rubber gloves;

j) A respirator is not normally required if there are only a few pieces of ACM in a small area, and if the ACM is damp;

k) In large or heavily contaminated areas, a disposable respirator is needed (not a dust mask) with an Assigned Protection Factor of 20 or more (e.g. a respirator with a P3 filter);

l) There must be no smoking, eating or drinking on a site containing ACM.

F. a. Decontamination Procedure 1: Removing small pieces of ACM

a) Identify the location of all visible ACM and spray each lightly but thoroughly with water;

b) Once the ACM is damp, pick up all visible ACM with shovels and place in a clear plastic bag;

c) If ACM debris is partially buried in soil, remove it from the soil using a shovel and place it in the plastic bag;

d) Insert a large label inside each plastic bag stating clearly that the contents contain asbestos and are dangerous to human health and must not be handled;

e) Tie the plastic bags securely and place them into labelled asbestos waste containers (clean metal drums) and seal each drum;

f) **Soil that contained ACM debris must not be used for backfill** and must instead be shoveled by hand into asbestos waste containers;

g) At the end of the operation, clean all shovels and any other equipment with wet rags and place the rags into plastic disposal bags inside asbestos waste containers.

F. b. Decontamination Procedure 2: Removing ACM-contaminated backfill

a) If soil containing ACM debris has inadvertently been used for backfill this must be sprayed lightly with water and shoveled out by hand to a depth of 300 mm and placed directly into asbestos waste containers (i.e. not stored temporarily beside the trench);

b) Any ACM uncovered during the hand shoveling must be placed in a clear plastic bag;

c) Once the trench has been re-excavated to 300 mm, if there is no visible ACM remaining, the trench may be refilled by excavator using imported clean topsoil.

F. c. Decontamination Procedure 3: Removing AC pipes or large pieces of ACM

1. If AC pipes or other large pieces of ACM are uncovered during excavation in an undamaged condition and they can be re-covered by soil and left in place in the ground undisturbed, this should be done. If AC pipes or other large pieces of ACM need to be removed from site:

a) Inform the city Toza Hudud of the nature and size of the large ACM and arrange for them to dig a suitable cavity at the disposal site to receive and bury the material;

b) Sprinkle the ACM thoroughly with water, ensuring that any broken or damaged areas in particular are thoroughly wetted;

c) Inform excavator and truck drivers of the dangers associated with ACM and instruct them to remain inside their cabs with the windows closed throughout the operation.

d) Lift the material by excavator into a dump truck, without causing additional breakage and with as little disturbance as possible;

e) Cover the bed of the truck with a secure tarpaulin and transport the ACM to the disposal site with as little disturbance of the carried material as possible;

f) Manual assistance should be limited to securing the tarpaulin if possible, and personnel providing such assistance should wear PPE as indicated in Section E;

g) At the disposal site, tip the ACM directly into the prepared cavity and arrange for it to be covered with soil immediately.

G. Disposal

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

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

a) Personal Decontamination

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

- At the end of the decontamination operation, clean the boots thoroughly with damp rags;
- Peel off the disposable overalls and plastic gloves so that they are inside-out and place them in a plastic sack with the rags used to clean the boots;
- If a disposable respirator has been used, place that in the plastic sack, seal the sack and place it in an asbestos waste container;

- All personnel should wash thoroughly before leaving the site, and the washing area must be cleaned with damp rags afterwards, which are placed in plastic sacks as above.

b) Clearance and Checking-Off

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

TRAINING

PM&DSC's Environmental Specialist will conduct training on ACMMP implementation for Contractors staff and PIU. The training will include a session focusing on ACM, which covered:

a. Risks of contact with ACM (in general and the IUDP risk assessment);
b. Responsibilities for dealing with ACM on IUDP construction sites;
c. The IUDP ACMMP and the Protocol for site clean-up;
d. Awareness-raising for the contractors' workforce.

COST ESTIMATE

Costs incurred by contractors in implementing the ACMMP are included in their budget in EMP budget.

APPENDIX 4. Template of Traffic Management Plan

CONSTRUCTION TRAFFIC MANAGEMENT PLAN

(Template)

GENERAL INFORMATION

1. Full postal address of the site
2. Contact details for the person responsible for submitting the Site-Specific Construction Traffic Management Plan (Name, tel., e-mail)
3. Brief description of the work.

PROGRAMME/KEY DATES

4. A broad-brush program and total timescale for the project, giving the duration of each major phase of the construction and the anticipated start date if known. There are examples of works which could be included in the Table:

#	Type of work	Planning start date	Duration	Completion
1	Mobilization			
2	Demolishing of building			
3	Leveling of the territory			
4	Earth works			
5	Construction of the main buildings			
6	Finishing works			
7	Equipment installation			
8	Site cleaning			

5. Indicate site operation date and hours.

ROUTEING OF DEMOLITION, EXCAVATION AND CONSTRUCTION VEHICLE

6. Proposed supply route to and from the site, showing details of links to the strategic road network (A and B roads). – provide a map with indication directions.

SITE ACCESS

7. Site plan showing all points of access and where materials, skips and plant will be stored, and how vehicles will access the site.
8. How will vehicles enter and leave the site?
9. Provide plan of site with indication of above-mentioned items (para 7 and 8)

VEHICLES ACCESSING THE SITE PER DAY/WEEK

10. Provide a breakdown of the number, type, size and weight of vehicles accessing the site.
11. Deliveries and collections should generally be restricted to between 9.30am and 4.30pm. Please confirm your acceptance to this condition and describe how it will be forced.
12. Provide information will vehicle wheel wash facilities be provided or not. If yes, describe who it will be organized.

IMPACT ON OTHER ROAD USERS

13. Site plan showing all points of access and where materials, skips and plant will by stored, and how vehicles will access the site.

GENERAL MANAGEMENT

14. Indicate who will be responsible for overall management of CTMP and coordination with local Traffic Police

APPENDIX 5. Chance finds procedure

1. 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.

2. 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

3. 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 Archeology (MoA) 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: ➢ Apply the change find procedure as described above. ➢ Schedule a field inspection with an archaeologist to confirm that remains are human. ➢ Advise and liaise with the (MoA) and Police ➢ Remains will be recovered and removed either to the National Museum or the National Forensic Laboratory.	Archaeologist Representatives of Khokimiyat and Ministry of Archeology Police	

APPENDIX 6. Results of baseline environmental monitoring

Air quality and Noise

Methodology of analysis:

- Air quality - SanPIN 0293-11
- Noise - SanPIN 0325-16

Date: July, 2021

Measuring instruments:

- Psychrometer "HANNA"
- Aspirator
- Sound level meter "ВШВ 003"

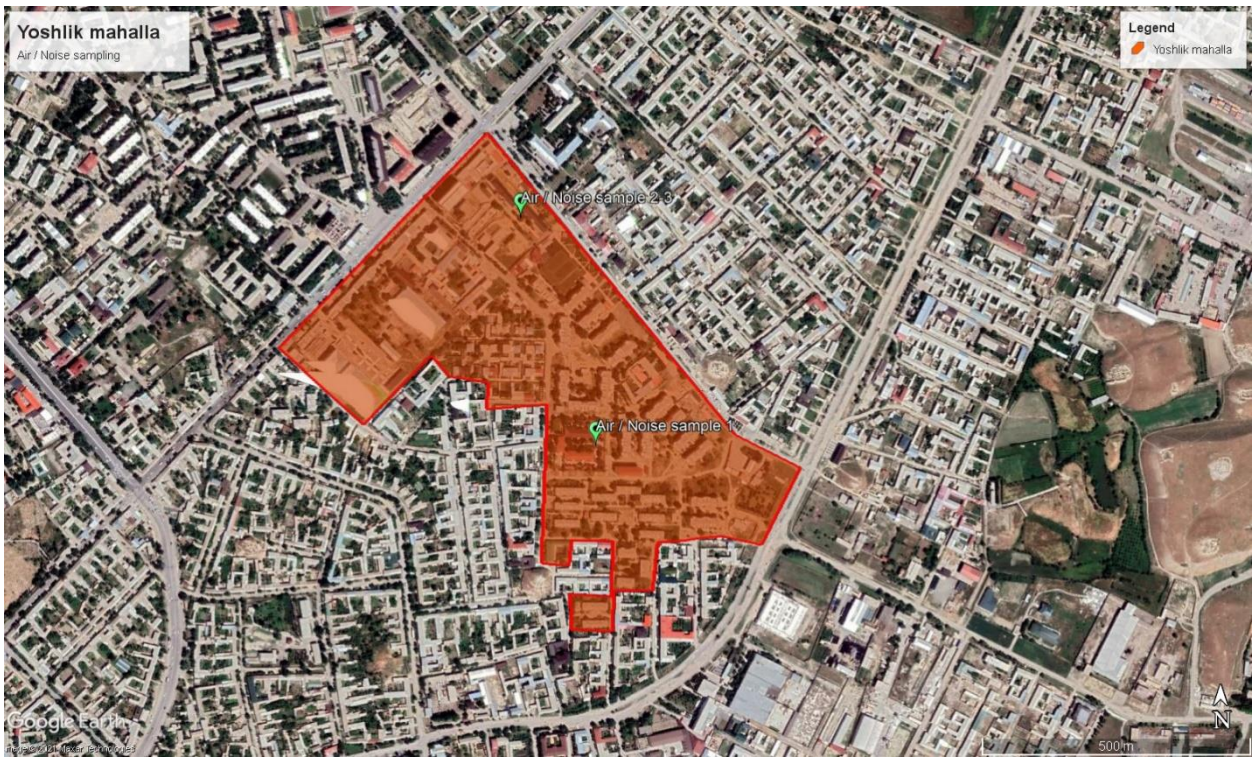


Figure 1: Sampling in Yoshlik mahalla

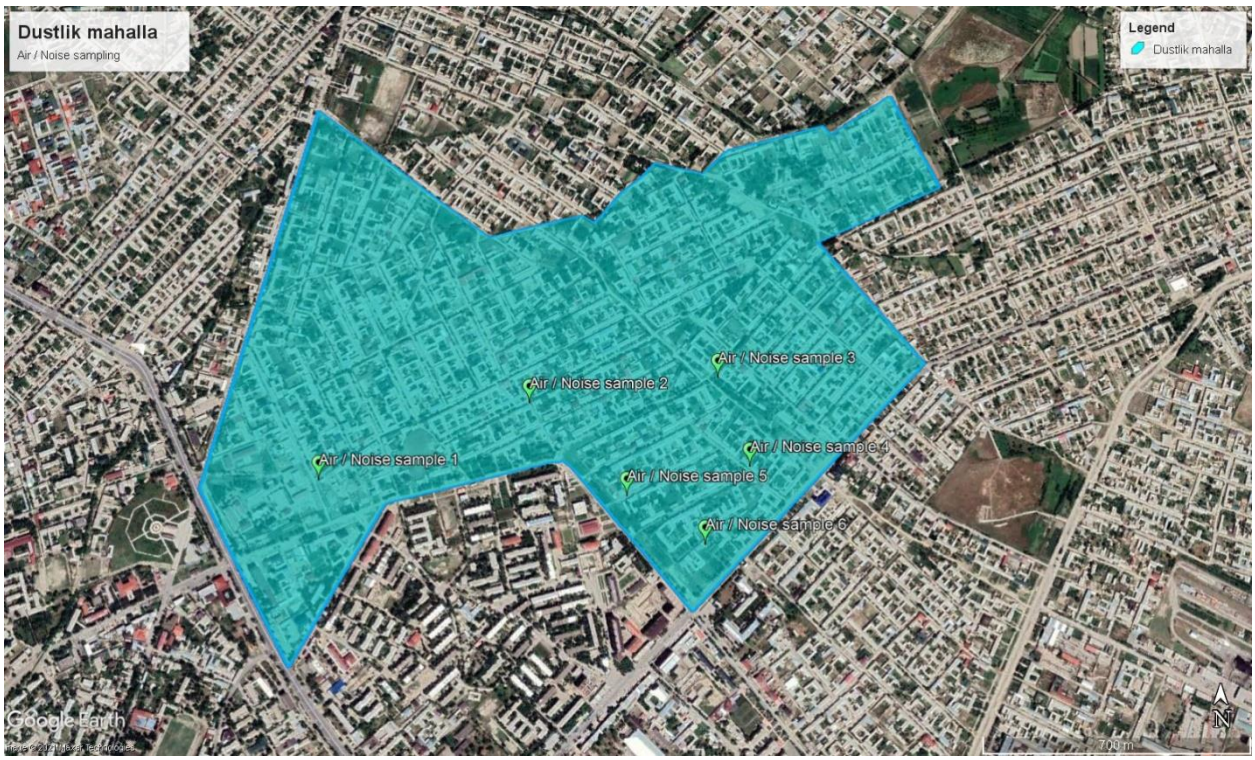


Figure 2: Sampling in Dustlik mahalla

Figure 3: Sampling in Ittifoq mahalla

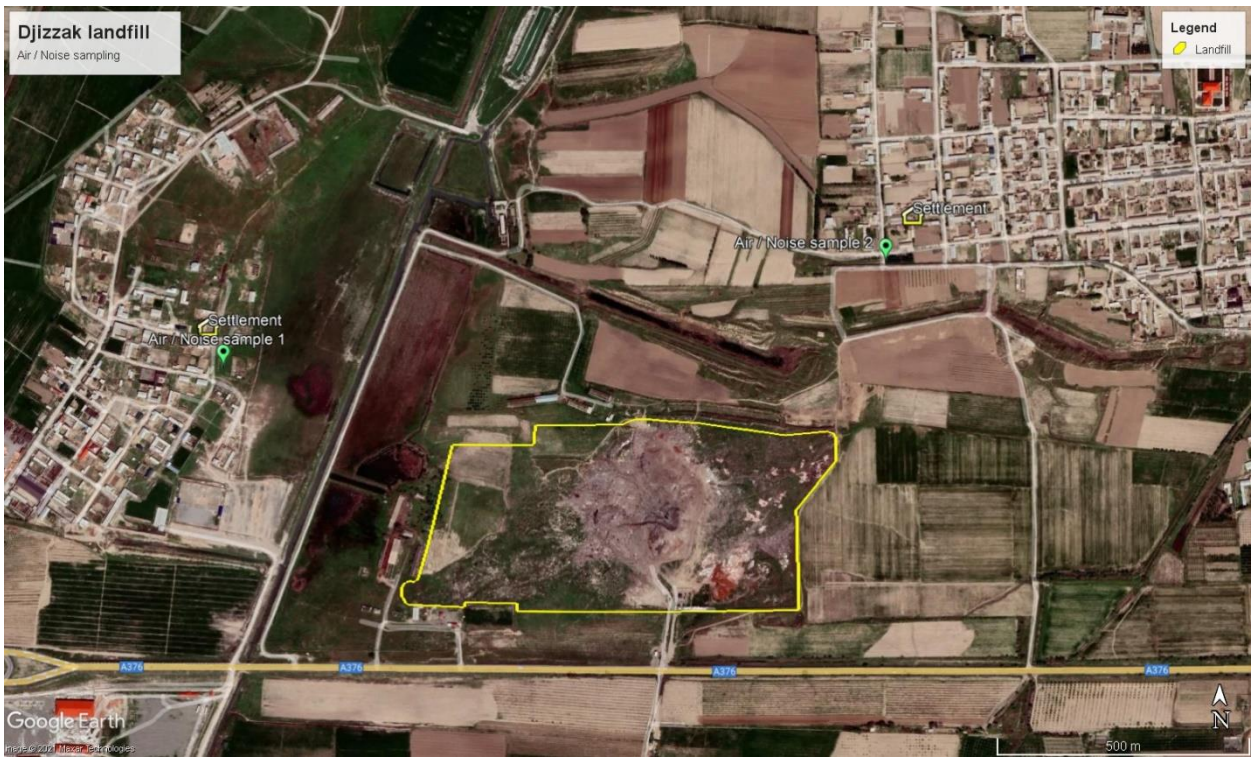


Figure 4: Sampling in Sharaf Rashidov district

Figure 5: Photos (August 5, 20121

Table 1: Results of Air quality analysis

#	Location	Name of pollutant and concentration, mg/m3								Coordinates
		NO_2		SO_2		CO		Dust		
		Actual	Standard	Actual	Standard	Actual	Standard	Actual	Standard	
Makhalla Yoshlik										
1	Near the Kindergarten #32	-	0,6	-	0,5	-	5,0	0,1	0,5	40.109972° 67.867708°
2	Near the Institute of Obstetrics and Gynecology 1	-	0,6	-	0,5	-	5,0	0,14	0,5	40.113768° 67.866101°

#	Location	Name of pollutant and concentration, mg/m3								Coordinates
		NO_2		SO_2		CO		Dust		
		Actual	Standard	Actual	Standard	Actual	Standard	Actual	Standard	
3	Near the Institute of Obstetrics and Gynecology 2	-	0,6	-	0,5	-	5,0	0,18	0,5	40.113765° 67.866538°
Makhalla Ittifoq										
1	Near the Kindergarten #36	-	0,6	-	0,5	-	5,0	0,11	0,5	40.114690° 67.854151°
2	Near the Neurological Hospital	-	0,6	-	0,5	-	5,0	0,13	0,5	40.115100° 67.856708°
3	Near the school #17	-	0,6	-	0,5	-	5,0	0,2	0,5	40.116816° 67.857706°
4	Near the Specialized Art School	-	0,6	-	0,5	0,015	5,0	0,22	0,5	40.116007° 67.858508°
5	Near the Endocrinological Dispensary	-	0,6	-	0,5	0,02	5,0	0,24	0,5	40.115861° 67.853792°
6	Near the Kindergarten #9	-	0,6	-	0,5	-	5,0	0,12	0,5	40.115116° 67.860776°
7	Near the Children's Sports School		0,6	-	0,5	0,015	5,0	0,25	0,5	40.117871° 67.861598°
8	Near Family Clinic #4		0,6	-	0,5	0,02	5,0	0,2	0,5	40.116784° 67.862811°
9	Near the School #7		0,6	-	0,5	-	5,0	0,11	0,5	40.112780°67.860940°
	Makhalla Dustlik									
1	Sugdiyona Street	-	0,6	-	0,5	-	5,0	0,16	0,5	40.118340° 67.853475°
2	Nurlitepa Street	-	0,6	-	0,5	-	5,0	0,18	0,5	40.120210° 67.860154°
3	Near Confectionery	-	0,6	-	0,5	0,13	5,0	0,22	0,5	40.122028° 67.864448°
4	Tongotar Street	-	0,6	-	0,5	-	5,0	0,14	0,5	40.119908° 67.865438°
5	Ziyokor Street	-	0,6	-	0,5	-	5,0	0,17	0,5	40.117980° 67.863200°
6	Ziyokor 1 A Street	-	0,6	-	0,5	0,12	5,0	0,19	0,5	40.116901° 67.865714°

Table 2: Results of noise analysis

№	Location	Day time (7 am – 11 pm) Night time (11 pm - 7 am)	Sound pressure levels, dB, in octave frequency bands with geometric mean frequencies, Hz											Noise level (equivalent noise level in db)	Standard	Coordinates
			8	16	31,5	63	125	250	500	1000	2000	4000	8000			
Yoshlik makhalla																
1	Near the Kindergarten #32	Day time			79	55	50	45	36	33	32	30	28	48db	35	40.109972° 67.867708°
		Night time			78	56	50	43	38	32	31	30	29		35	
2	Near the Institute of Obstetrics and Gynecology 1	Day time			78	62	48	42	40	35	37	34	29		35	40.113768° 67.866101°
		Night time			78	59	48	42	42	38	41	34	30	52db	35	
3	Near the Institute of Obstetrics and Gynecology 2	Day time			79	63	49	43	41	36	38	36	28		35	40.113765° 67.866538°
		Night time			79	60	49	43	44	38	41	34	30	52db	35	
Ittifoq makhalla																
1	Near the Kindergarten #36	Day time			82	70	59	54	50	48	45	43	41	52db	35	40.114690° 67.854151°
		Night time			81	68	57	52	49	47	43	41	40		35	
2	Near the Neurological Hospital	Day time			79	69	59	52	49	47	43	41	40	54db	35	40.115100° 67.856708°
		Night time			79	60	49	43	44	38	41	34	30		35	
3	Near the School #17	Day time			79	69	59	52	49	47	43	41	40	54db	35	40.116816° 67.857706°
		Night time			79	60	49	43	44	38	41	34	30		35	
4		Day time			79	60	49	43	44	38	41	34	30	53db	40	40.116007° 67.858508°

№	Location	Day time (7 am – 11 pm) Night time (11 pm - 7 am)	Sound pressure levels, dB, in octave frequency bands with geometric mean frequencies, Hz											Noise level (equivalent noise level in db)	Standard	Coordinates
			8	16	31,5	63	125	250	500	1000	2000	4000	8000			
	Near the Specialized Art School	Night time			78	59	48	44	43	39	40	35	31		40	
5	Near the Endocrinological Dispensary	Day time			82	70	59	54	50	48	45	43	41	58db	35	40.115861° 67.853792°
		Night time			81	68	57	52	49	47	43	41	40		35	
6	Near the Kindergarten #9	Day time			79	55	50	45	36	33	32	30	28	48db	35	40.115116° 67.860776°
		Night time			78	56	50	43	38	32	31	30	29		35	
7	Near the Children's Sports School	Day time			60	58	56	54	52	50	50	44	44	56db	40	40.117871° 67.861598°
		Night time			59	57	55	54	50	49	49	42	42		40	
8	Near the Family Clinic	Day time			59	57	58	55	53	51	49	45	43	56db	35	40.116784° 67.862811°
		Night time			59	57	55	54	50	49	49	42	42		35	
9	Near the School #7	Day time			60	58	56	54	52	50	50	44	44	53db	40	40.112780° 67.860940°
		Night time			59	57	55	54	50	49	49	42	42		40	
Dustlik makhalla																
12	Sugdiyona Street	Day time			75	68	58	52	49	46	44	42	40	46db	55	40.118340° 67.853475°
		Night time			72	58	56	51	48	46	42	40	39		45	

№	Location	Day time (7 am – 11 pm) Night time (11 pm - 7 am)	Sound pressure levels, dB, in octave frequency bands with geometric mean frequencies, Hz											Noise level (equivalent noise level in db)	Standard	Coordinates
			8	16	31,5	63	125	250	500	1000	2000	4000	8000			
13	Nurlitepa Street	Day time			79	69	59	52	48	47	43	42	40	48db	55	40.120210° 67.860154°
		Night time			79	67	58	51	47	47	42	41	39		45	
14	Near Confectionery	Day time			79	60	49	43	44	38	41	34	30	53db	60	40.122028° 67.864448°
		Night time			78	59	48	44	43	39	40	35	31		60	
15	Tongotar Street	Day time			77	73	58	52	51	47	44	42	40	50db	55	40.119908° 67.865438°
		Night time			79	67	56	51	48	46	42	40	39		45	
16	Ziyokor Street	Day time			79	55	50	45	36	33	32	30	28	49db	55	40.117980° 67.863200°
		Night time			78	56	50	43	38	32	31	30	29		45	
17	Ziyokor 1 A Street	Day time			60	58	56	54	52	50	50	44	44	51db	55	40.116901° 67.865714°
		Night time			59	57	55	54	50	49	49	42	42		45	

Water quality

Methodology of analysis: SanPIN 0318-15

Date: July, 2021

Figure 6: Sampling in Sharaf Rashidov district

Table 3: Results of Water quality analysis

№	Name of pollutant and concentration	Location					
		1		2		3	
		Actual	Standard	Actual	Standard	Actual	Standard
1	Air temperature, C°	40	-	40	-	40	-
2	Water temperature	16	20	16	20	16	20
3	pH	7	6,5-8,5	7	6,5-8,5	7	6,5-8,5
4	BOD5	1,5	3 - 6	1,5	3 - 6	1,5	3 - 6
5	Oxidizability	0,4	2	0,4	2	0,4	2
6	COD	3,5	30	3,5	30	3,5	30
7	Total hardness	6,3	9	6,3	9	6,3	9
8	Dry residue	270	1000	270	1000	270	1000
9	Chlorides	34,14	350	34,14	350	34,14	350
10	Sulphates	71,9	500	71,9	500	71,9	500
11	Copper	0,09	1	0,09	1	0,09	1
12	Lead	0,09	0,1	0,09	0,1	0,09	0,1
13	Zinc	0,6832	1	0,6832	1	0,6832	1
Coordinates		40.103876° 67.955291°		40.099748° 67.953107°		40.096002° 67.951204°	

Soil quality

Methodology of analysis: SanPIN 0191-05

Date: July, 2021

Figure 7: Sampling in Sharaf Rashidov district

Table 4: Results of soil analysis

#	Name of pollutant and concentration	Location							
		1		2		3		4	
		Actual (mg)	Standard (mg)	Actual (mg)	Standard (mg)	Actual (mg)	Standard (mg)	Actual (mg)	Standard (mg)
1	pH	7	8	7	8	7	8	7	8
2	Chromium	0,29	6	0	6	0	6	0	6
3	Zinc	1,7	23	1,7	23	1,41	23	0,98	23
4	Copper	0	3	0,32	3	0,6	3	0	3
5	Lead	0,0049	32	0,038	32	0,5	32	0,7	32
6	Oil products	0	0	0	0	0	0	0	0
7	Mercury	0	2,1	0	2,1	0	2,1	0	2,1
8	Cadmium	0	0	0	0	0	0	0	0
Coordinates		40.099033° 67.956642°		40.099075° 67.963380°		40.097257° 67.956360°		40.097070° 67.962915°	

APPENDIX 7. Leaflet distributed during the Public Consultation

Russian version

ПРОЕКТ КОМПЛЕКСНОГО РАЗВИТИЯ ГОРОДОВ ПРИ СОДЕЙСТВИИ АЗИАТСКОГО БАНКА РАЗВИТИЯ

О ПРОЕКТЕ

Компонент 2 «Реконструкция систем водоснабжения и канализации»

Подкомпонент 2.1 «Реконструкция систем водоснабжения и канализации г. Джизак»

Подкомпонент 2.2 «Поддержка эффективности управления системы водоснабжения г. Джизак»

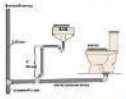
Подкомпонент 2.3 «Пропаганда гигиены и меры по борьбе с COVID-19»

Подкомпонент 2.1 «Реконструкция систем водоснабжения и канализации г. Джизак»

Реконструкция 35.45 км (23.05 км в городе Джизак и 7.4 км Амир Темур – Сангзар – Джизак) и строительство 5.21 км (в городе Джизак) новых магистральных трубопроводов.

Реконструкция около 5.2 км (махалля Иттифок) и строительство 20.0 км (махалля Дустлик) распределительных трубопроводов, включая новые (махалля Дустлик), и реабилитацию существующих домашних подключений к водопроводу (махалля Иттифок)

Установка систем SCADA с объемными счетчиками на водозаборах и магистральных магистралях; установка ультразвуковых расходомеров воды на объектах водоснабжения.



Благоустройство канализации (реконструкция и строительство 13,450 км канализационных сетей, и 560 домовых подключений) в махалле Дустлик.

Установка 4х погружных насосов (включая 4 ультрафиолетовые установки для определения воды) с частотным регулированием на одиночные скважины

Установка умных бытовых счетчиков для 33,460 (включая 4,376 в трёх махаллях) абонентов в г. Джизак.

Подкомпонент 2.2 «Поддержка эффективности управления системы водоснабжения г. Джизак»

Приобретения для Джизаксувтаминот оборудования для эксплуатации и технического обслуживания

Подкомпонент 2.3 «Пропаганда гигиены и меры по борьбе с COVID-19»

Программа по пропаганде гигиены, включающая рекламные кампании и установку умывальников в 3х школах, 2х детских садах и 1 больнице в 3х проектных махаллях.

2022 — 2025

ПЕРИОД РЕАЛИЗАЦИИ

КОНТАКТНАЯ ИНФОРМАЦИЯ ДЛЯ СПРАВОК

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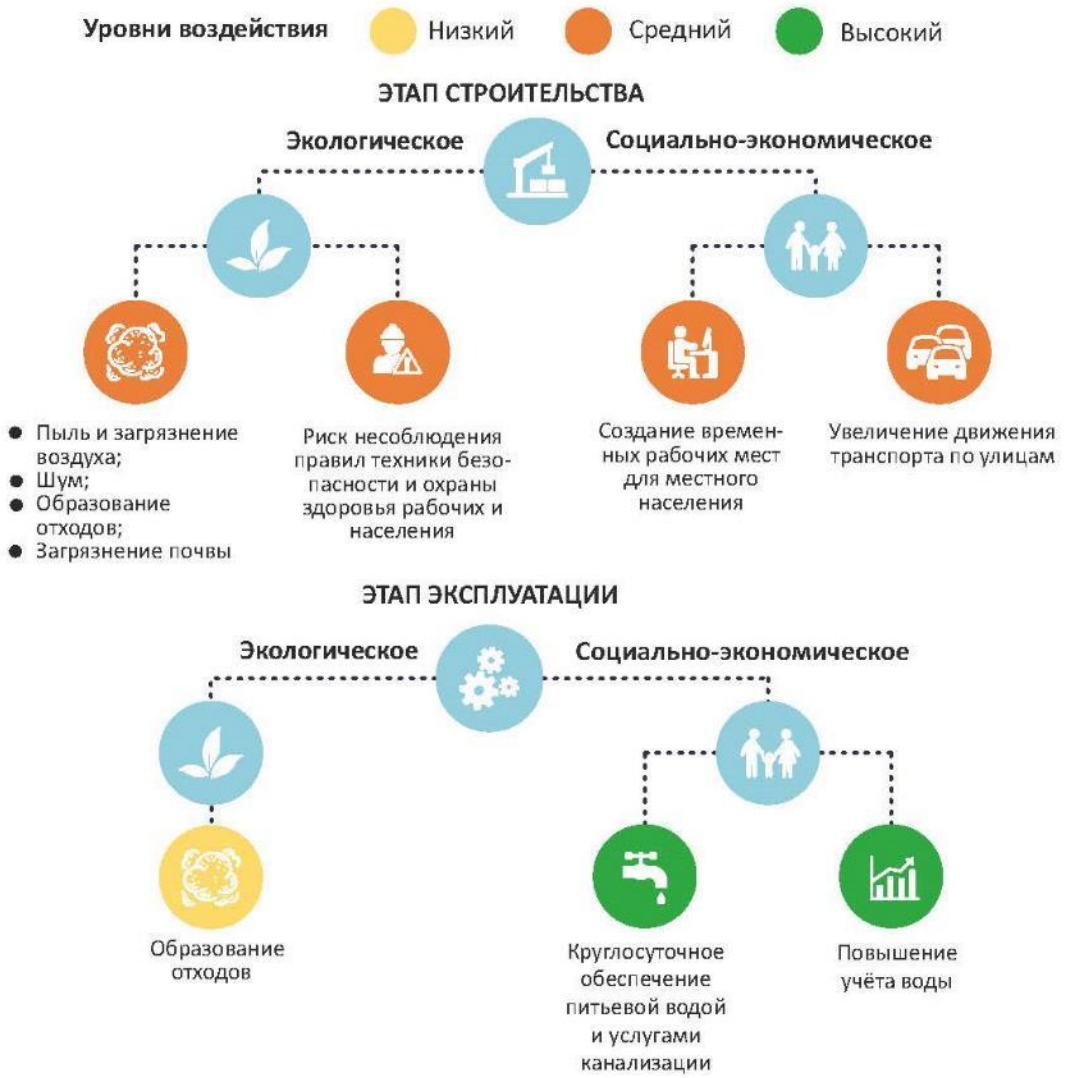
Тел: (+998) 72 222-40-10; (+998) 72 222-40-97;
E-mail: jizzax.sh@exat.uz

ПРОЕКТ КОМПЛЕКСНОГО РАЗВИТИЯ ГОРОДОВ ПРИ СОДЕЙСТВИИ АЗИАТСКОГО БАНКА РАЗВИТИЯ

СОБЛЮДЕНИЕ ЗАЩИТНЫХ МЕР ПРИ РЕАЛИЗАЦИИ ПРОЕКТА

Первоначальная экологическая оценка (ПЭО) и **национальный документ - Заявление о воздействии на окружающую среду** будут проводиться в соответствии с Положением о Политике по Защитным Мерам (2009 г.) Азиатского Банка Развития (АБР) и национальным экологическим законодательством. Целью ОВОС является определение типов воздействий проекта на этапах строительства и эксплуатации. Ниже приводится краткое изложение основных воздействий:



Для смягчения негативных воздействий в рамках Проекта будут разработаны *План по управлению окружающей средой (ПУОС) и План управления и мониторинга охраны труда и техники безопасности (ПУМОТТБ).*

КОНТАКТНАЯ ИНФОРМАЦИЯ ДЛЯ СПРАВОК

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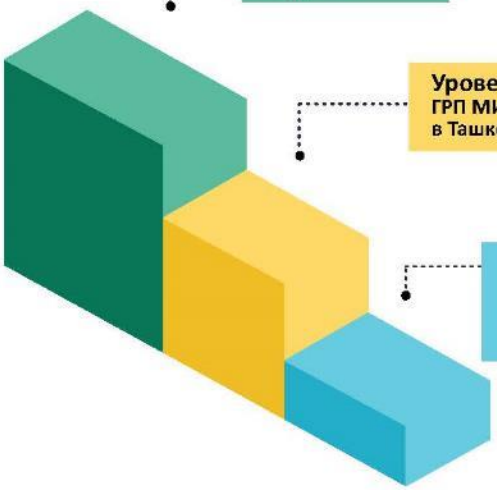
ПРОЕКТ КОМПЛЕКСНОГО РАЗВИТИЯ ГОРОДОВ ПРИ СОДЕЙСТВИИ АЗИАТСКОГО БАНКА РАЗВИТИЯ

РАСКРЫТИЕ ИНФОРМАЦИИ И МЕХАНИЗМ РАССМОТРЕНИЯ ЖАЛОБ

Печатные версии результатов экологической оценки будут предоставлены в махаллинские комитеты, городской хокимият и Госкомэкологии, где можно ознакомиться с документами и оставить свои комментарии.



Уровень 3: **Механизм подотчетности АБР и Экономический суд РУз**

- Заявители жалоб также могут использовать Механизм подотчетности АБР путем прямого обращения в Штаб Квартиру в Маниле.
- Люди, затронутые проектом, могут обратиться в Экономический суд в любой момент во время рассмотрения жалобы.

Уровень 2: **ГРП МИВТ РУз в Ташкенте**

- Регистрация жалоб производится специалистом по защитным мерам в ГРП МИВТ РУз;
- Обсуждение и решение выносится в течении 15-20 дней.

Уровень 1: **Региональные ГРП и бенефициары Проекта**

- Регистрация жалоб местным специалистом РГРП;
- Параллельно РГРП информирует соответствующего бенефициара проекта (подрядной организации, сход граждан махалли, городские хокимияты, ГУП «Тоза Худуд», ООО «Джиззак Сувтаъминоти») о поступившем обращении
- Обсуждение и решение в течение 14 дней.

- **ГРП –** Группа реализации проекта
- **РГРП –** Региональная группа реализации Проекта
- **МИВТ –** Министерство инвестиций и внешней торговли
- **АБР –** Азиатский Банк Развития

КОНТАКТНАЯ ИНФОРМАЦИЯ ДЛЯ СПРАВОК

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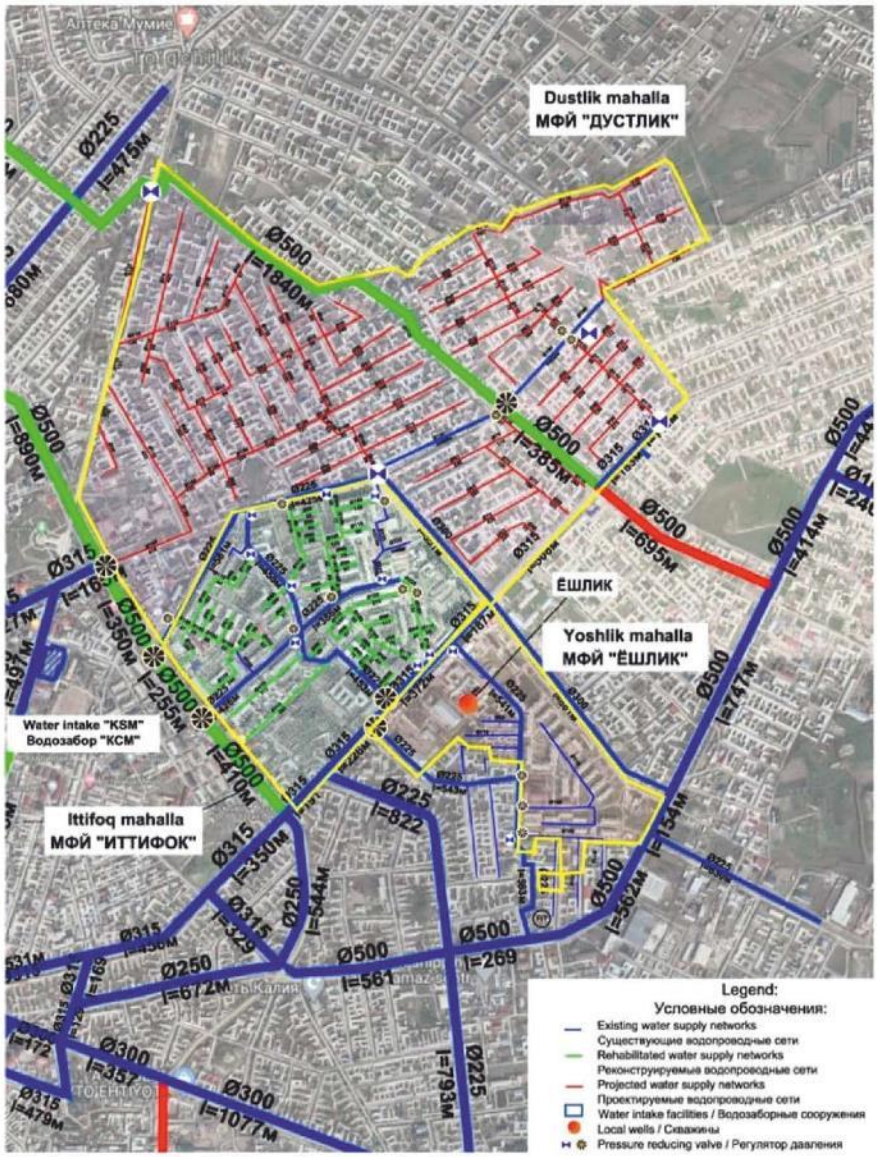
ОБЩАЯ КАРТА РАСПОЛОЖЕНИЯ ПОДПРОЕКТОВ СЕКТОРА ВОДОСНАБЖЕНИЯ В ТРЁХ МАХАЛЛЯХ



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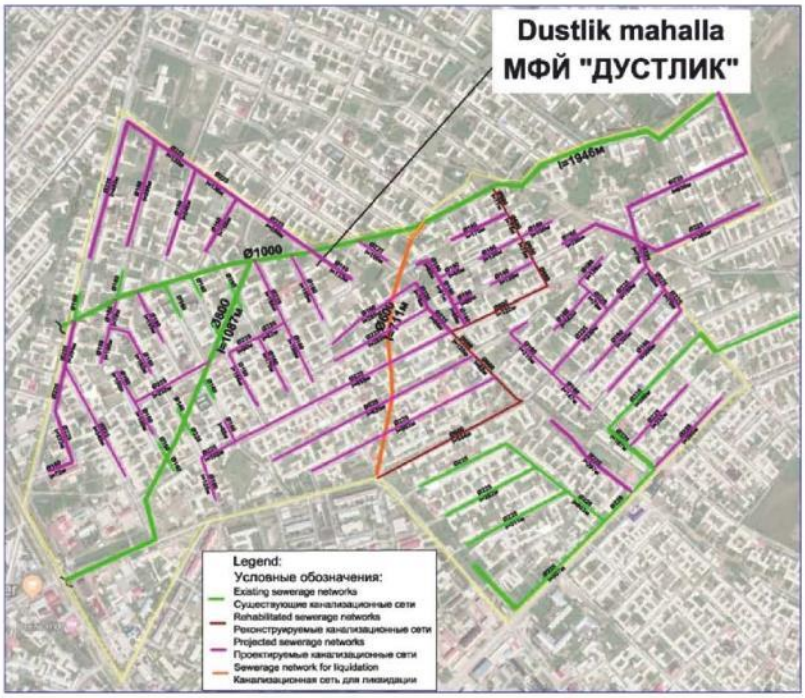
ПРОЕКТ КОМПЛЕКСНОГО РАЗВИТИЯ ГОРОДОВ
ПРИ СОДЕЙСТВИИ АЗИАТСКОГО БАНКА РАЗВИТИЯ

БЛАГОУСТРОЙСТВО КАНАЛИЗАЦИИ В МАХАЛЛЕ ДУСТЛИК



БЛАГОУСТРОЙСТВО ВОДОВОДА

КОНТАКТНАЯ ИНФОРМАЦИЯ ДЛЯ СПРАВОК

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Uzbek version

ОСИЁ ТАРАҚҚИЁТ БАНКИ ЁРДАМИДА «ШАХАРЛАРНИ КОМПЛЕКС РИВОЖЛАНТИРИШ» ЛОЙИХАСИ

ЛОЙИҲАНИНГ НОМЛАНИШИ

2-компонент «Сув таъминоти ва канализация тизимларини реконструкция қилиш"

2.1-кичик компонент "Жиззах шаҳридаги сув таъминоти ва канализация тизимларини реконструкция қилиш"

2.2-кичик компонент "Жиззах шаҳридаги сув таъминоти бошқаруви самарадорлигини қўллаб-қувватлаш"

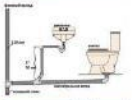
2.3-кичик компонент "Гигиена ташвиқоти ва COVID-19 га қарши кураш чоралари"

2.1-кичик компонент "Жиззах шаҳридаги сув таъминоти ва канализация тизимларини реконструкция қилиш"

35,45 км магистрал қувурларни реконструкция қилиш (23,05 км – Жиззах шаҳрида ва 7,4 км – Амир Темур-Сангзар-Жиззах) ва 5,21 км янги магистраль қувурларни қуриш

5,2 км тақсимлаш қувурларини реконструкция қилиш (Иттифоқ маҳалласи) ва 20,0 км тақсимлаш қувурларини қуриш, шу жумладан янги қувурларни қуриш (Дўстлик маҳалласи) ва мавжуд сув таъминоти қувурларига уйлардаги уланишларни тиклаш (Иттифоқ маҳалласи)

Сув чиқариш жойлари ва магистрал қувурларда ҳажмли ҳисоблагичли SCADA тизимларини ўрнатиш; сув таъминоти объектларида ультратовушли сувсарфлагичларни ўрнатиш



Дўстлик маҳалласида канализация тизимини ободонлаштириш (13,450 км канализация тармоғини реконструкция қилиш ва қуриш)

Якка қудуқларга частота билан тартибга солинадиган 4 та чўктирма насос (шу жумладан сувни аниқлаш учун 4 та ультрабинафша қурилма) ўрнатиш

Жиззах шаҳрида 33 460 абонент (шу жумладан учта маҳалладаги 4 376 абонент) учун ақлли маиший ҳисоблагичларни ўрнатиш.

2.2-кичик компонент "Жиззах шаҳридаги сув таъминоти бошқаруви самарадорлигини қўллаб-қувватлаш"

Жиззахсувтаъминот учун эксплуатация ва техник хизмат кўрсатиш ускуналарини харид қилиш

2.3-кичик компонент "Гигиена ташвиқоти ва COVID-19 га қарши кураш чоралари"

Лойиҳа доирасидаги учта маҳаллада 3 та мактаб, 2 та мактабгача таълим ташкилоти ва 1 та касалхонада реклама кампанияларини ва юз ювгичларни ўрнатиш билан ўтказиладиган гигиена ташвиқотини ўтказиш

2025

2022

АМАЛГА ОШИРИШ ДАВРИ

МАЪЛУМОТЛАР УЧУН КОНТАКТ АХБОРОТ

ИТСВ ЛАОГ:
Манзил: Тошкент ш., Т.Шевченко кўчаси, 34-уй
Тел: (+998) 71 252 42 20
E-mail: iudpuzbekistan@gmail.com

ЖИЗЗАХ ШАХАР ХОКИМЛИГИ
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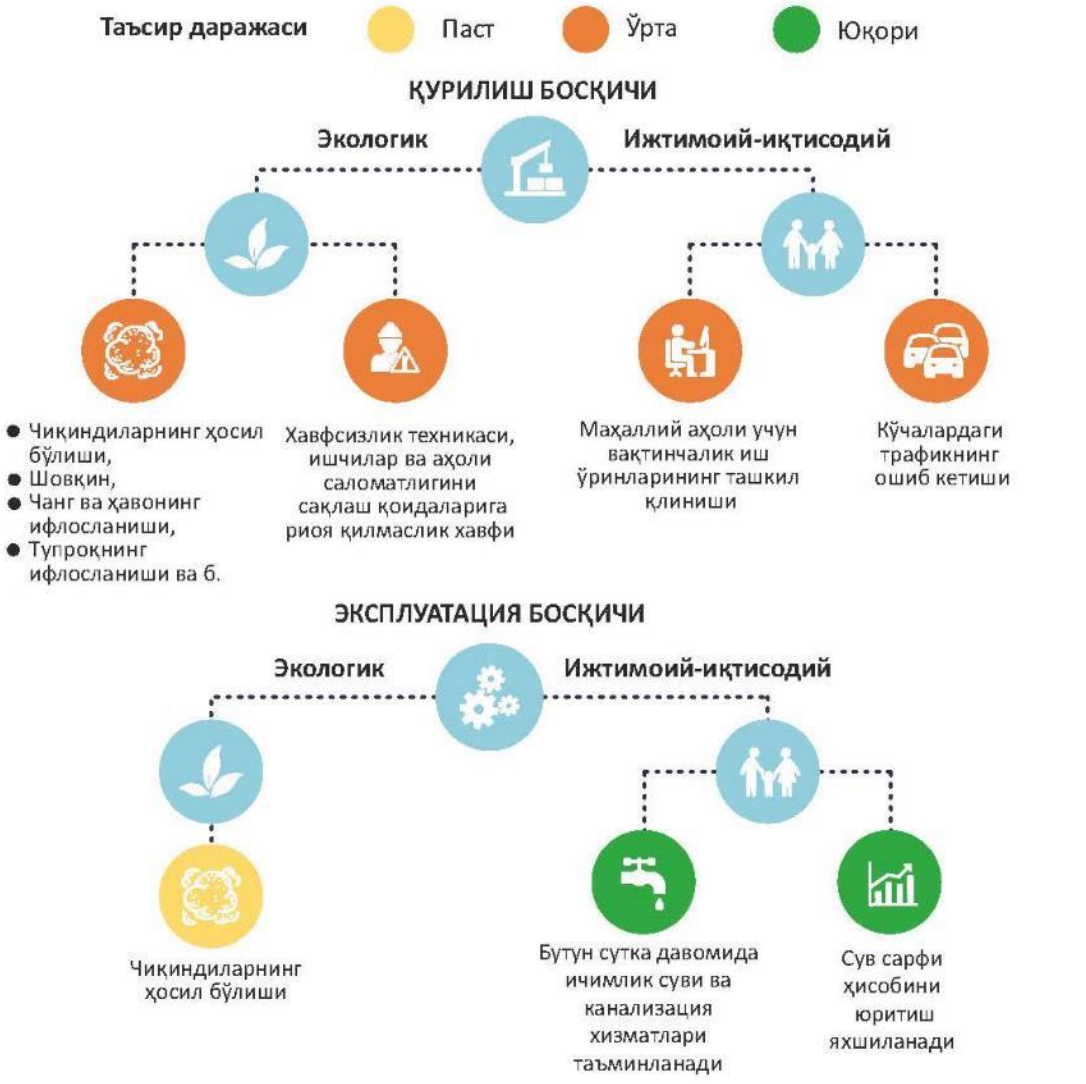
Тел: (+998) 72 222-40-10; (+998) 72 222-40-97;
E-mail: jizzax.sh@exat.uz

ОСИЁ ТАРАҚҚИЁТ БАНКИ ЁРДАМИДА «ШАХАРЛАРНИ КОМПЛЕКС РИВОЖЛАНТИРИШ» ЛОЙИХАСИ

ЛОЙИҲАНИ АМАЛГА ОШИРИШДА ҲИМОЯ ЧОРАЛАРИГА РИОЯ ҚИЛИШ

Дастлабки экологик баҳолаш (ДЭБ) ва миллий ҳужжат – Атроф мухитга таъсир кўрсатилиши тўғрисидаги баёнотни тузиш Осиё Тараккиёт Банки (ОТБ)нинг химоя чоралари бўйича сиёсат хакидаги Низоми (2009й.) ва экология сохасига оид миллий конун хужжатларига мувофик ўтказилади. АМТК тўғрисидаги баёнотнинг максади курилиш ва эксплуатация боскичида лойиханинг таъсир кўрсатиш турларини аниклашдан иборат.



Лойиҳанинг салбий таъсирларини юмшатиш учун Атроф Муҳитни Бошқариш Режаси (АМБР) ҳамда Меҳнат муҳофазаси ва хавфсизлик техникасини бошқариш ва мониторинги режаси (ММХТБМР) ишлаб чиқилади.

МАЪЛУМОТЛАР УЧУН КОНТАКТ АХБОРОТ

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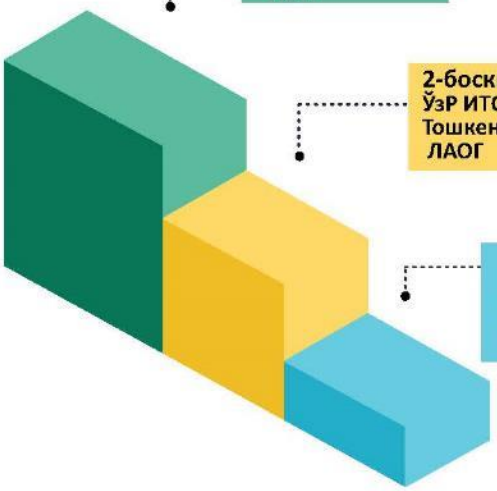
МАЪЛУМОТЛАРНИ ОШКОР ҚИЛИШ ВА ШИКОЯТЛАРНИ КЎРИБ ЧИҚИШ МЕХАНИЗМИ

Экологик баҳолаш натижаларининг босма вариантлари тегишли ҳужжатлар билан танишиб чиқиб, ўз изоҳларини баён этиш учун маҳалла қўмиталарига, шаҳар ҳокимлиги ва Давлат экология қўмитасига тақдим этилади.



3-боскич: ОТБнинг ҳисоборлик механизми ва ЎзР Иқтисодий суди

- Шикоят берувчилар, шунингдек, Манила шаҳридаги Штаб-квартирага тўғридан тўғри мурожаат қилиш йўли билан ОТБнинг ҳисобдорлик механизмидан фойдаланиши ҳам мумкин.
- Лойиҳа билан боғлиқ шахслар шикоят кўриб чиқишнинг исталган босқичида Иқтисодий судга мурожаат қилиши мумкин.

2-боскич: ЎзР ИТСВнинг Тошкентдаги ЛАОГ

- Шикотлар ЎзР ИТСВ ЛАОГнинг ҳимоя чоралари бўйича мутахассис томонидан рўйхатга олинади;
- Муҳокама ва қарор қабул қилиш 20 кун давомида амалга оширилади.

1-боскич: Ҳудудий ЛАОГ ва лойиҳа бенефициарлари

- Шикоятлар ҲЛАОГ маҳаллий мутахассиси томонидан рўйхатга олинади;
- ҲЛАОГ лойиҳанинг тегишли бенефициари (пудрат ташкилоти, маҳалла фуқаролар йиғини, шаҳар ҳокимликлари, вилоят "Тоза Ҳудуд" ДУК, "Жиззах Сувтаъминот" МЧЖ)ни келиб тушган мурожаат ҳақида хабардор қилади;
- Муҳокама ва қарор қабул қилиш 14 кун давомида амалга оширилади.

- **ЛАОГ – Лойихани амалга ошириш гурухи**
- **ХЛАОГ – Ҳудудий лойихани амалга ошириш гурухи**
- **ИТСВ – Инвестициялар ва Ташки Савдо Вазирлиги**
- **ОТБ – Осиё Тараккиёт Банки**

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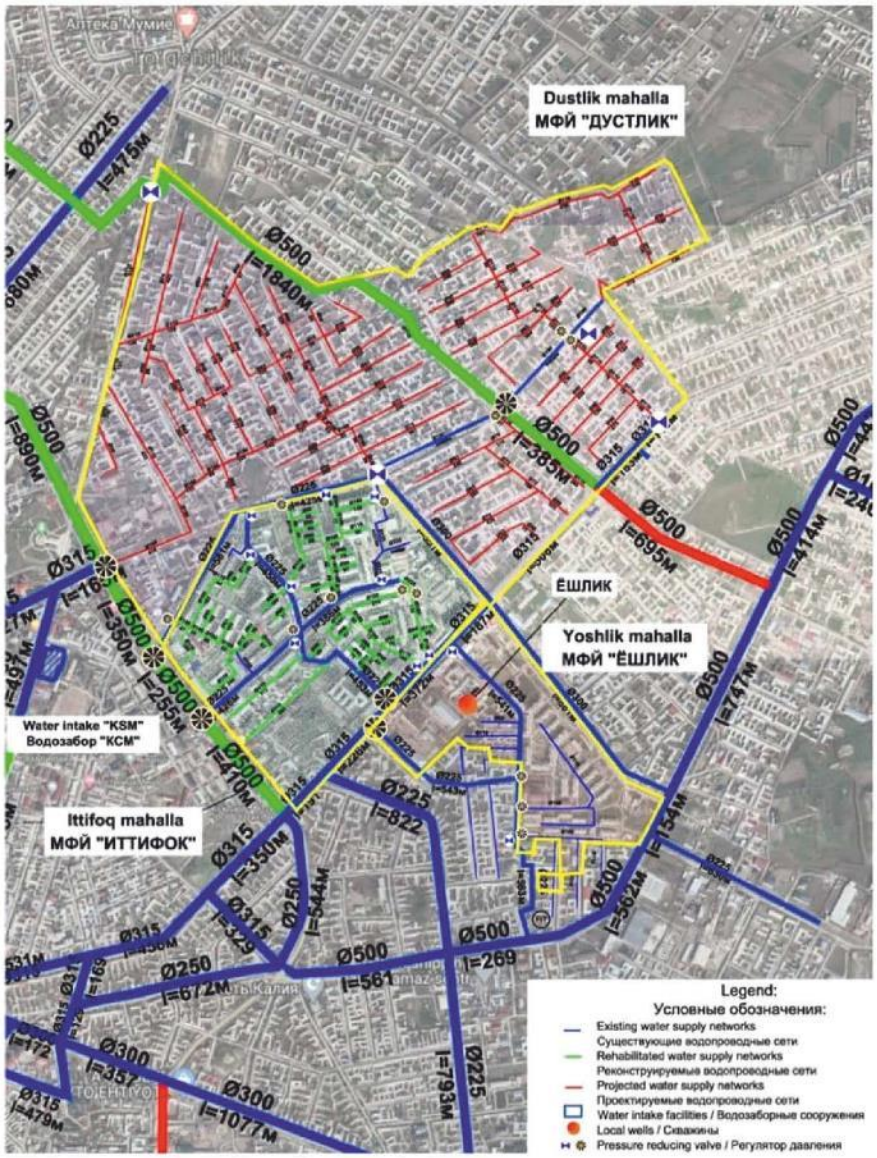
3 ТА МАҲАЛЛАДАГИ СУВ ТАЪМИНОТИ СЕКТОРИНИНГ ДАСТЛАБКИ ЛОЙИҲАЛАРИ ЖОЙЛАШУВИНИНГ УМУМИЙ ХАРИТАСИ



МАЪЛУМОТЛАР УЧУН КОНТАКТ АХБОРОТ

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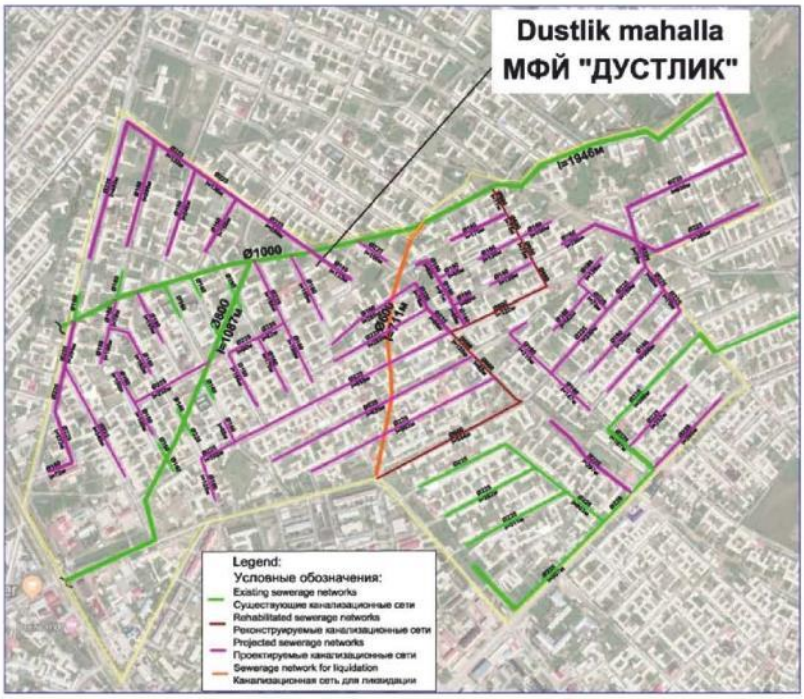
ДЎСТЛИК МАҲАЛЛАСИДА КАНАЛИЗАЦИЯ ТИЗИМИНИ ОБОДОНЛАШТИРИШ



СУВЎТКАЗГИЧНИ ОБОДОНЛАШТИРИШ

МАЪЛУМОТЛАР УЧУН КОНТАКТ АХБОРОТ

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APPENDIX 8. Minutes of Public Consultations within the national EIS

Amir Temur mahalla

Давлат экология қўмитаси
раиси ўринбосарининг
2021 йил "14" октябрдаги
04-01/10-281 - сон топшириғига илова

„Жиззах сув таъминоти" МЧЖ томонидан
(буюртмачининг номи)
„Амир Темур" МФЙ худудида
(обьект манзили)
ичимлик сув тармоғи фаолиятини
(фаолият тури)

ташкил этиш бўйича ўтказилган жамоатчилик назорати (эшитуви)

ХУЛОСАСИ

"___" __________ **2021 й.** Жиззах **шаҳар (туман)**

Катнашдилар: -
Буюртмачи вакили: -

Экология ва атроф-муҳит муҳофазаси бошқармаси Жиззах шаҳар (туман) инспекцияси вакили - Н. Чинкобулов
„Амир Темур" МФЙ раиси - Рахманов

Қўшни худуд корхона вакиллари: -
1. 24-сонли мактаб директори - Т. Мамастиқулова
2. -
3. -

Объект худудига яқин масофада истиқомат қилувчи аҳоли: -
1. Маранов А.И. - Махалла оқсоқоли.
2. Қоғорастбулов -
3. Чиарзаков Ш.Э. -
4. Усанов Азамат -
5. Элмуродов З. -
6. Абдурасулов П. -
7. Ф. Умрзоков -
8. Ортиқов М -
9. Шоердумаев -
10. Сулаймонова

КУН ТАРТИБИ

Жиззах сув таъминоти" МЧЖ томонидан _____ Анор Темур МФЙ
(буюртмачининг номи) *(обьект манзили)*

ҳудудида режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) ичимлик сув тармоғи **фаолиятининг экологик талабларга мувофиқлигини белгилаш ҳамда экологик экспертиза объектини рўёбга чиқариш мумкинлиги юзасидан жамоачилик фикрини ўрганиш тўғрисида.**
(фаолият тури)

Кун тартибидаги масала юзасидан қуйидаги маълумотлар тақдим этилди.

Обьект жойлашган майдон _____ м^2 ни ташкил қилиб, чегараланиши куйиидагича:

шимол томондан: _____;

шарқ томондан: _____;

ғарб томондан: _____;

жануб томондан: _____;

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: _____ м.

Объект буюртмачининг *балансида* ёки *ижарада*.

Объект _____

_____

_____

_____.*

* *янгидан ташкил этилаётган экспертиза объекти ёки фаолият кўрсатаётган объект реконструкция, модернизация қилинган, қайта ташкил этилган, кенгайтирилган ёки жойлашуви ўзгартирилганлик тўғрисидаги маълумотлар киритилади.*

Ҳудудда мавжуд ўсимликлар дунёси бўйича тўлиқ маълумот:

Ўсимликларнинг умумий сони: _____ туб дарахт ва _____ туб бўта мавжуд бўлиб, шундан:

№	Дарахт тури	Диаметри	Бўйи	Холати
1.				
2.				
3.				
....				
№	**Бўталарнинг турлари**	**Диаметри**	**Бўйи**	**Холати**
1.				
2.				
3.				
...				

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолиятни рўёбга чиқарилиши натижасида:

ҳудудда мавжуд бўлган _____ туб дарахт ва _____ туб бўта кесилиши;

қўшимча _____ м2 ҳудуд кўкаламзорлаштирилиши кўзда тутилган.

Ўзбекистон Республикаси Вазирлар Маҳкамасининг 2021 йил 7 сентябрдаги 541-сон қарорининг 1-иловаси билан тасдиқланган фаолият турларининг рўйхатига мувофиқ режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолият тури ___ - тоифага мансуб.

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолият учун танланган ер майдонига нисбатан яқин масофада сув объекти (дарё, сой, сув

омбори ва бошқа сув ҳавзаси)нинг мавжудлиги:

_____ - сув объекти танланган ер майдонидан _____ м узоқ масофада жойлашган.

Фаолиятни амалга ошириш натижасида йилига __ м^3 миқдорида оқава, __ м^3 маиший чиқинди ҳамда __ м^3 курилиш чиқиндилари ҳосил бўлиб, улар қуйидаги тартибда бартараф этилади:

Ҳосил бўлган чиқиндилар „Тоза Ҳудуд" ДУК билан шартнома асосида олиб чиқиб кетилади.

(чиқиндиларни ташиб кетиш, оқаваларни тозалаш ва уларни ташланиши тўғрисида маълумот)

Кун тартибидаги масала атрофлича мухокома килиниб, жамоатчилик назорати (эшитуви) иштирокчилари қарор қилади:

„Жиззах сув таъминоти" МЧЖ томонидан Амир Темур МФЙ
(буюртмачининг номи) *(обьект манзили)*

ҳудудида режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) ичимлик сув таъминоти фаолиятининг экологик талабларга
(фаолият тури)

мувофиклигини инобатга олиб, танланган ер майдонида фаолиятни ташкил этиш ва юритишга розилик билдиради.

ёки,

_____ томонидан _____
(буюртмачининг номи) *(обьект манзили)*

ҳудудида режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) _____ фаолиятининг экологик талабларга
(фаолият тури)

мувофиқ бўлмаганлиги сабабли, танланган ер майдонида фаолиятни ташкил этишни рад этади.

Қабул қилинган қарорларни тўғри деб имзо чекувчилар:

Буюртмачи вакили: -

Экология ва атроф-муҳит мухофазаси бошқармаси Боғец шуъбаси шаҳар (туман) инспекцияси вакили Амир Темур МФЙ раиси -

Қўшни худуд корхона вакиллари:

1. 24-сонли мактаб б/б директори: -
2. -
3. -

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли:

1. -
2. -
3. -
4. -
5. -
6. -
7. -
8. -
9. -
10. -

Bogi Shamol mahalla

Давлат экология қўмитаси
раиси ўринбосарининг
2021 йил "14" октябрдаги
04-01/10-281 - сон топшириғига ило

Жиззах сув таъминоти МЧЖ
(буюртмачининг номи)
томонидан

Боғишамол МФЙ
(обьект манзили)
худудида

ичимлик сув тармоғи
(фаолият тури)
фаолиятини

ташкил этиш бўйичаўтказилган жамоатчилик назорати (эшитуви)

ХУЛОСАСИ

"___" _____ 2021 й. Жиззах шаҳар (туман)

Катнашдилар: -

Буюртмачи вакили: -

Экология ва атроф-мухит муҳофазаси бошқармаси Зарафшон шаҳар (туман) инспекцияси вакили - Нишонов Н.

Боғишамол МФЙ раиси - Холмуродова Ф.

Қўшни худуд корхона вакиллари: -

1. -
2. -
3. -

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: -

1. Сокаль Ю -
2. Тожибоев М -
3. Мавлянов О -
4. Шералиева Х -
5. Тошпулатова С -
6. Бахромов С -
7. Мавлянов Р -
8. Тошпулатова Ч -
9. Анорбоева М -
10. Эшмонов Ж -

КУН ТАРТИБИ

«Жиззах сув таъминоти» МЧЖ томонидан Бозшунослик

(буюртмачининг номи)

(обьект манзили) **ҳудудидарежалаштирилаётган (мўлжалланаётган, амалга оширилаётган)** ичимлик сув тармоғи **фаолиятинингэкологик талабларга**

(фаолият тури)

мувофиқлигини белгилаш ҳамда экологик экспертиза объектини рўёбга чиқариш мумкинлиги юзасидан жамоачилик фикрини ўрганиш тўғрисида.

Кун тартибидаги масала юзасидан қуйидаги маълумотлар тақдим этилди.

Обьект жойлашган майдон _____м^{2}ни ташкил қилиб,чегараланиши куйиидагича:

шимол томондан: _____;

шарқ томондан: _____;

ғарб томондан: _____;

жануб томондан: _____;

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: _____м.

Объект буюртмачининг *балансида* ёки *ижарада*.

Объект _____

_____

_____

_____.*

** янгидан ташкил этилаётган экспертиза объекти ёки фаолият кўрсатаётган объект реконструкция, модернизация қилинган, қайта ташкил этилган, кенгайтирилган ёки жойлашуви ўзгартирилганлик тўғрисидаги маълумотлар киритилади.*

Ҳудудда мавжудўсимликлар дунёси бўйича тўлиқ маълумот:

Ўсимликларнинг умумий сони:_____ туб дарахт ва ____ туб бўта мавжуд бўлиб, шундан:

№	Дарахт тури	Диаметри	Бўйи	Холати
1.				
2.				
3.				
....				
№	**Бўталарнинг турлари**	**Диаметри**	**Бўйи**	**Холати**
1.				
2.				
3.				
...				

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолиятни рўёбга чиқарилиши натижасида:

ҳудудда мавжуд бўлган _____ туб дарахт ва ____ туб бўта кесилиши;

қўшимча ____ м2 ҳудуд кўкаламзорлаштирилиши кўзда тутилган.

Ўзбекистон Республикаси Вазирлар Махкамасининг 2021 йил 7 сентябрдаги 541-сон қарорининг 1-иловаси билан тасдиқланган фаолият турларининг рўйхатига мувофиқ режалаштирилаётган(мўлжалланаётган, амалга оширилаётган)фаолият тури___ - тоифага мансуб.

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган)фаолият учун

танланган ер майдонига нисбатан якин масофада сув объекти (дарё, сой, сув омбори ва бошқа сув ҳавзаси)нинг мавжудлиги:

_____ - сув объекти танланган ер майдонидан ____ м узоқ масофада жойлашган.

Фаолиятни амалга ошириш натижасида йилига __ $м^3$ миқдорида оқава, __ $м^3$ маиший чиқинди ҳамда __ $м^3$ қурилиш чиқиндилари ҳосил бўлиб, улар қуйидаги тартибда бартараф этилади:

Ҳосил бўлган чиқиндилар "Тоза ҳудуд" ДУК билан шартнома асосида олиб кетилади.

(чиқиндиларни ташиб кетиш, оқаваларни тозалаш ва уларни ташланиши тўғрисида маълумот)

Кун тартибидаги масала атрофлича мухокома килиниб, жамоатчилик назорати (эшитуви) иштирокчилари қарор қилади:

"Иззах сув таъминот" МЧЖ томонидан Бойчанол МФ
(буюртмачининг номи) *(обьект манзили)*ҳудудида
режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) ичимлик сув тармоғи фаолиятининг экологик талабларга
(фаолият тури)
мувофиклигини инобатга олиб, танланган ер майдонида фаолиятни ташкил этиш ва юритишга розилик билдиради.

ёки,

_____ томонидан _____
(буюртмачининг номи) *(обьект манзили)*ҳудудида
режалаштирилаётган (мўлжалланаётган, амалга оширилаётган)
_____ фаолиятининг экологик талабларга
(фаолият тури)
мувофиқ бўлмаганлиги сабабли, танланган ер майдонида фаолиятни ташкил этишни рад этади.

Қабул қилинган қарорларни тўғри деб имзо чекувчилар:

Буюртмачи вакили: -

Экология ва атроф-муҳит мухофазаси бошкармаси Боғ туманлараро шаҳар (туман) инспекцияси вакили -

Бойчанол МФЙ раиси -

Қўшни ҳудуд корхона вакиллари: -

1. - -
2. -
3. -

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: -

1. -
2. Тожибоев М. -
3. Мавлянова Д -
4. Шогабдинова. Х. Ш -
5. Гошкулатова С
6. Баходиров С
7. Мавлянов Р
8. Гошназарова Х
9. Ахарбоева М
10. Эшмонов Ж

Dustlik mahalla

Давлат экология қўмитаси
раиси ўринбосарининг
2021 йил "14" октябрдаги
04-01/10-281 - сон топшириғига илова

„Жиззах сув таъминоти" МЧЖ
(буюртмачининг номи)
томонидан

Жиззах шаҳри „Дўстлик" МФЙ
(объект манзили)
худудида

ичимлик ва оқова сув тармоқлари
(фаолият тури)
фаолиятини

ташкил этиш бўйичаўтказилган жамоатчилик назорати (эшитуви)

ХУЛОСАСИ

"___" _____ **2021 й.** Жиззах шаҳар (туман)

Катнашдилар: -

Буюртмачи вакили: -

Экология ва атроф-муҳит муҳофазаси бошқармаси бошл. ғегтологов
шаҳар (туман) инспекцияси вакили
„Дўстлик" МФЙ раиси -

Қўшни худуд корхона вакиллари: -

1.
2. -
3. -

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: -

1. Ортиқова Л. Н
2. Умарова Д. А.
3. Аҳмедов Ғ. С.
4. Юсупов М.
5. Муминова Г.С
6. Икромов О.
7. Икромова Ю.
8. Асатуллаев Х
9. Рахматуллаев С
10. Асатуллаев Ф

КУН ТАРТИБИ

«Жиззах сув таъминоти" МЧЖ томонидан Жиззах ш. Дўстлик МФЙ
(буюртмачининг номи)

(обьект манзили) **ҳудудидарежалаштирилаётган (мўлжалланаётган, амалга оширилаётган)** ичимлик ва оқова сув тармоғи **фаолиятинингэкологик талабларга**
(фаолият тури)

мувофиқлигини белгилаш ҳамда экологик экспертиза объектини рўёбга чиқариш мумкинлиги юзасидан жамоачилик фикрини ўрганиш тўғрисида.

Кун тартибидаги масала юзасидан қуйидаги маълумотлар тақдим этилди.

Обьект жойлашган майдон _____м^{2}ни ташкил қилиб,чегараланиши куйиидагича:

шимол томондан: _____;

шарқ томондан: _____;

ғарб томондан: _____;

жануб томондан: _____;

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: _____м.

Объект буюртмачининг *балансида* ёки *ижарада*.

Объект _____
_____
_____
_____.*

** янгидан ташкил этилаётган экспертиза объекти ёки фаолият кўрсатаётган объект реконструкция, модернизация қилинган, қайта ташкил этилган, кенгайтирилган ёки жойлашуви ўзгартирилганлик тўғрисидаги маълумотлар киритилади.*

Ҳудудда мавжудўсимликлар дунёси бўйича тўлиқ маълумот:

Ўсимликларнинг умумий сони:_____ туб дарахт ва ____ туб бўта мавжуд бўлиб, шундан:

№	Дарахт тури	Диаметри	Бўйи	Холати
1.				
2.				
3.				
....				
№	**Бўталарнинг турлари**	**Диаметри**	**Бўйи**	**Холати**
1.				
2.				
3.				
...				

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолиятни рўёбга чиқарилиши натижасида:

ҳудудда мавжуд бўлган _____ туб дарахт ва ____ туб бўта кесилиши;

қўшимча ____ м2 ҳудуд кўкаламзорлаштирилиши кўзда тутилган.

Ўзбекистон Республикаси Вазирлар Махкамасининг 2021 йил 7 сентябрдаги 541-сон қарорининг 1-иловаси билан тасдиқланган фаолият турларининг рўйхатига мувофиқ режалаштирилаётган(мўлжалланаётган, амалга оширилаётган)фаолият тури___ - тоифага мансуб.

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган)фаолият учун

танланган ер майдонига нисбатан яқин масофада сув объекти (дарё, сой, сув омбори ва бошқа сув ҳавзаси)нинг мавжудлиги:

_____ - сув объекти танланган ер майдонидан _____ м узоқ масофада жойлашган.

Фаолиятни амалга ошириш натижасида йилига __ $м^3$ миқдорида оқава, __ $м^3$ маиший чиқинди ҳамда __ $м^3$ қурилиш чиқиндилари ҳосил бўлиб, улар қуйидаги тартибда бартараф этилади:

Ҳосил бўлган чиқиндилар „Тоза ҳудуд" ДУК билан шартнома асосида олиб чиқиб кетилади

(чиқиндиларни ташиб кетиш, оқаваларни тозалаш ва уларни ташланиши тўғрисида маълумот)

Кун тартибидаги масала атрофлича мухокома килиниб, жамоатчилик назорати (эшитуви) иштирокчилари қарор қилади:

„Жиззах сув таъминоти" МЧЖ томонидан Жиззах ш. Дўстлик МФЙ
(буюртмачининг номи) *(обьект манзили)*ҳудудида

режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) ичимлик ва оқова сув тармоқлари фаолиятининг экологик талабларга
(фаолият тури)

мувофиқлигини инобатга олиб, танланган ер майдонида фаолиятни ташкил этиш ва юритишга розилик билдиради.

ёки,

_____ томонидан _____
(буюртмачининг номи) *(обьект манзили)*ҳудудида

режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) _____ фаолиятининг экологик талабларга
(фаолият тури)

мувофиқ бўлмаганлиги сабабли, танланган ер майдонида фаолиятни ташкил этишни рад этади.

Қабул қилинган қарорларни тўғри деб имзо чекувчилар:

Буюртмачи вакили: -

Экология ва атроф-муҳит муҳофазаси бошқармаси бошлиғи шаҳар (туман) инспекцияси вакили Дўстлик МФЙ раиси -

Қўшни худуд корхона вакиллари: -

1. -
2. -
3. -

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли:

1. Аршикова Л. Н.
2. Умарова Д. А.
3. Аҳмедов Н.
4. Юсупов М. С
5. Муминова Г. С
6. Икромова К.
7. Икромов Ф.
8. Рахматуллаев Х
9. Рахматуллаев С
10. Рахматуллаева Х

Yoshlik mahalla

Давлат экология қўмитаси
раиси ўринбосарининг
2021 йил "14" октябрдаги
04-01/10-281 - сон топшириғига илова

„Нукус сув таъминоти" МЧЖ томонидан
(буюртмачининг номи)
Нукус шаҳри „Ёшлик" МФЙ ҳудудида
(объект манзили)
ичимлик сув тармоқлари фаолиятини
(фаолият тури)

ташкил этиш бўйича ўтказилган жамоатчилик назорати (эшитуви)

ХУЛОСАСИ

"___" ____________ 2021 й. Нукус шаҳар (туман)

Катнашдилар: -
Буюртмачи вакили: -

Экология ва атроф-муҳит муҳофазаси бошқармаси бош мутахассис шаҳар (туман) инспекцияси вакили - Н. Шакобулов.
Ёшлик МФЙ раиси - Б. Гузаулов

Қўшни ҳудуд корхона вакиллари: -
1. Иномова Хуршида -
2. Окилова Малика -
3. Касимов Хасан -

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: -
1. Мехирова Эътибор -
2. Тургалова Малика -
3. Абдуллажетова Мукаддас -
4. Иномов Омир И. -
5. Хайдаров Бахтиёр -
6. Маматов Исмоил -
7. Курбонов Шакар -
8. Мукимова Исмоил -
9. Каримов Исмоил -
10. Парсионова Ю. -

КУН ТАРТИБИ

Нуззах сув таъминоти" МЧЖ томонидан Нуззах ш., Ёшлик" МФЙ
(буюртмачининг номи) *(объект манзили)*

ҳудудида режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) ичимлик сув тармоқлари **фаолиятининг экологик талабларга** *(фаолият тури)*
мувофиқлигини белгилаш ҳамда экологик экспертиза объектини рўёбга чиқариш мумкинлиги юзасидан жамоачилик фикрини ўрганиш тўғрисида.

Кун тартибидаги масала юзасидан қуйидаги маълумотлар тақдим этилди.

Обьект жойлашган майдон _____ $м^2$ ни ташкил қилиб, чегараланиши қуйидагича:

шимол томондан: _____;

шарқ томондан: _____;

ғарб томондан: _____;

жануб томондан: _____;

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: _____ м.

Объект буюртмачининг *балансида* ёки *ижарада*.

Объект _____
_____
_____
_____.*

* *янгидан ташкил этилаётган экспертиза объекти ёки фаолият кўрсатаётган объект реконструкция, модернизация қилинган, қайта ташкил этилган, кенгайтирилган ёки жойлашуви ўзгартирилганлик тўғрисидаги маълумотлар киритилади.*

Ҳудудда мавжуд ўсимликлар дунёси бўйича тўлиқ маълумот:

Ўсимликларнинг умумий сони: _____ туб дарахт ва ____ туб бўта мавжуд бўлиб, шундан:

№	Дарахт тури	Диаметри	Бўйи	Холати
1.				
2.				
3.				
....				
№	**Бўталарнинг турлари**	**Диаметри**	**Бўйи**	**Холати**
1.				
2.				
3.				
...				

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолиятни рўёбга чиқарилиши натижасида:

ҳудудда мавжуд бўлган _____ туб дарахт ва ____ туб бўта кесилиши;

қўшимча ____ м2 ҳудуд кўкаламзорлаштирилиши кўзда тутилган.

Ўзбекистон Республикаси Вазирлар Маҳкамасининг 2021 йил 7 сентябрдаги 541-сон қарорининг 1-иловаси билан тасдиқланган фаолият турларининг рўйхатига мувофиқ режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолият тури ___ - тоифага мансуб.

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолият учун танланган ер майдонига нисбатан яқин масофада сув объекти (дарё, сой, сув

омбори ва бошқа сув ҳавзаси)нинг мавжудлиги:

_______________ - сув объекти танланган ер майдонидан ____ м узоқ масофада жойлашган.

Фаолиятни амалга ошириш натижасида йилига __ м^3 миқдорида оқава, __ м^3 маиший чиқинди ҳамда __ м^3 қурилиш чиқиндилари ҳосил бўлиб, улар қуйидаги тартибда бартараф этилади:

Ҳосил бўлган чиқиндилар „Тоза ҳудуд" ДУК билан шартнома асосида олиб чиқиб кетилади.

(чиқиндиларни ташиб кетиш, оқаваларни тозалаш ва уларни ташланиши тўғрисида маълумот)

Кун тартибидаги масала атрофлича муҳокама қилиниб, жамоатчилик назорати (эшитуви) иштирокчилари қарор қилади:

„Жиззах сув таъминоти" МЧЖ томонидан Жиззах ш. Ёшлик МФЙ
(буюртмачининг номи) *(объект манзили)*
ҳудудида режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) ичимлик сув тармоқлари фаолиятининг экологик талабларга
(фаолият тури)
мувофиқлигини инобатга олиб, танланган ер майдонида фаолиятни ташкил этиш ва юритишга розилик билдиради.

ёки,

_______________ томонидан _______________
(буюртмачининг номи) *(объект манзили)*
ҳудудида режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) _______________ фаолиятининг экологик талабларга
(фаолият тури)
мувофиқ бўлмаганлиги сабабли, танланган ер майдонида фаолиятни ташкил этишни рад этади.

Қабул қилинган қарорларни тўғри деб имзо чекувчилар:

Буюртмачи вакили: -

Экология ва атроф-муҳит муҳофазаси бошқармаси Бош муҳофаза шаҳар (туман) инспекцияси вакили - Н. Ишкобулов.

Ёшлик МФЙ раиси - Б. Рузикулов

Қўшни ҳудуд корхона вакиллари: -

1. Ишмонова Хуршида -
2. Окилова Малика -
3. Хосимов Ислом -

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: -

1. Мелиқулова Зулфия -
2. Тухтамова Малика -
3. Абдумохатова Мухаё -
4. Ирмонов Олим -
5. Эсанбоев Бехзод

6. Мамадиев Исмоил.
7. Юсупбоев Шакар -
8. Муминова Искандар -
9. Хазратов Шавб -
10. Нарзиқулова Ю.

Ittifoq mahalla

Давлат экология қўмитаси
раиси ўринбосарининг
2021 йил "_14_" октябрдаги
04-01/10-281 - сон топшириғига илова

„Жиззах сув таъминоти" МЧЖ томонидан
(буюртмачининг номи)
Жиззах шахри „Иттифоқ" мфй ҳудудида
(обьект манзили)
ичимлик сув тармоқларини фаолиятини
(фаолият тури)

ташкил этиш бўйича ўтказилган жамоатчилик назорати (эшитуви)

ХУЛОСАСИ

"__" __________ 2021 й. Жиззах **шаҳар (туман)**

Катнашдилар: -
Буюртмачи вакили: -

Экология ва атроф-муҳит муҳофазаси бошқармаси Жиззах шаҳар (туман) инспекцияси вакили - М. Шиковбоев
Иттифоқ МФЙ раиси - М. Жасанов

Қўшни худуд корхона вакиллари: -
1. -
2. -
3. -

Объект худудига якин масофада истиқомат қилувчи аҳоли: -
1. Исанов Фарход -
2. Шермахаммадов Икром -
3. Кувондикова Саодат -
4. Янбулатова Олеся -
5. Проскурова Нигора -
6. Тагаева Нафиса -
7. Ген Тагиевна -
8. Хасанова Гулнора -
9. Ражабов Тоир -
10. Косимов Масур -

КУН ТАРТИБИ

„Жиззах сув таъминоти" МЧЖ томонидан Жиззах ш. Истиқлол МФЙ
(буюртмачининг номи) *(объект манзили)*

ҳудудида режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) ичимлик сув тармоқлари **фаолиятининг экологик талабларга мувофиқлигини белгилаш ҳамда экологик экспертиза объектини рўёбга чиқариш мумкинлиги юзасидан жамоачилик фикрини ўрганиш тўғрисида.**
(фаолият тури)

Кун тартибидаги масала юзасидан қуйидаги маълумотлар тақдим этилди.

Обьект жойлашган майдон _____ $м^2$ ни ташкил қилиб, чегараланиши куйиидагича:

шимол томондан: _____;

шарқ томондан: _____;

ғарб томондан: _____;

жануб томондан: _____;

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: _____ м.

Объект буюртмачининг *балансида* ёки *ижарада*.

Объект _____
_____
_____
_____.*

** янгидан ташкил этилаётган экспертиза объекти ёки фаолият кўрсатаётган объект реконструкция, модернизация қилинган, қайта ташкил этилган, кенгайтирилган ёки жойлашуви ўзгартирилганлик тўғрисидаги маълумотлар киритилади.*

Ҳудудда мавжуд ўсимликлар дунёси бўйича тўлиқ маълумот:

Ўсимликларнинг умумий сони: _____ туб дарахт ва _____ туб бўта мавжуд бўлиб, шундан:

№	Дарахт тури	Диаметри	Бўйи	Холати
1.				
2.				
3.				
....				
№	**Бўталарнинг турлари**	**Диаметри**	**Бўйи**	**Холати**
1.				
2.				
3.				
...				

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолиятни рўёбга чиқарилиши натижасида:

ҳудудда мавжуд бўлган _____ туб дарахт ва _____ туб бўта кесилиши;

қўшимча _____ м2 ҳудуд кўкаламзорлаштирилиши кўзда тутилган.

Ўзбекистон Республикаси Вазирлар Махкамасининг 2021 йил 7 сентябрдаги 541-сон қарорининг 1-иловаси билан тасдиқланган фаолият турларининг рўйхатига мувофиқ режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолият тури ___ - тоифага мансуб.

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолият учун танланган ер майдонига нисбатан яқин масофада сув объекти (дарё, сой, сув

омбори ва бошқа сув ҳавзаси)нинг мавжудлиги:

___________________________ - сув объекти танланган ер майдонидан ____ м узоқ масофада жойлашган.

Фаолиятни амалга ошириш натижасида йилига __ $м^3$ миқдорида оқава, __ $м^3$ маиший чиқинди ҳамда __ $м^3$ қурилиш чиқиндилари ҳосил бўлиб, улар қуйидаги тартибда бартараф этилади:

Ҳосил бўлган чиқиндилар „Тоза ҳудуд" ДУК билан шартнома асосида олиб чиқиб кетилади.

(чиқиндиларни ташиб кетиш, оқаваларни тозалаш ва уларни ташланиши тўғрисида маълумот)

Кун тартибидаги масала атрофлича мухокома килиниб, жамоатчилик назорати (эшитуви) иштирокчилари қарор қилади:

„Жиззах сув таъминоти" МЧЖ томонидан Жиззах ш. Иттифоқ МФЙ
(буюртмачининг номи) (обьект манзили)

худудида режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) ичимлик сув тармоқлари фаолиятининг экологик талабларга
(фаолият тури)

мувофиқлигини инобатга олиб, танланган ер майдонида фаолиятни ташкил этиш ва юритишга розилик билдиради.

ёки,

___________________________ томонидан ___________________________
(буюртмачининг номи) (обьект манзили)

худудида режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) ___________________________ фаолиятининг экологик талабларга
(фаолият тури)

мувофиқ бўлмаганлиги сабабли, танланган ер майдонида фаолиятни ташкил этишни рад этади.

Қабул қилинган қарорларни тўғри деб имзо чекувчилар:

Буюртмачи вакили: -

Экология ва атроф-муҳит муҳофазаси бошқармаси Жиззах шаҳар (туман) инспекцияси вакили - И. Шукуров.

Иттифоқ МФЙ раиси - М. Ҳасанов

Қўшни худуд корхона вакиллари: -

1. -
2. -
3. -

Объект худудига яқин масофада истиқомат килувчи аҳоли: -

1. Исанов Фарход -
2. Шерматаммадов Икром -
3. Қувондиқова Саодат -
4. Янбулатова Олеся -
5. Проскурова Нигора -
6. Пагаева Нарғиза
7. Ҳасанова Гулнора. -
8. Ражабов Тоир
9. Тен Татяна. -
10. Ҳасанова Гулбахор

Sangzor mahalla

Давлат экология қўмитаси
раиси ўринбосарининг
2021 йил "_14_" октябрдаги
04-01/10-281 - сон топшириғига илова

"Жиззах сув таъминоти" МЧЖ томонидан
(буюртмачининг номи)
"Сангзор" МФЙ худудида
(обьект манзили)
ичимлик сув тармоғи фаолиятини
(фаолият тури)

ташкил этиш бўйичаўтказилган жамоатчилик назорати (эшитуви)

ХУЛОСАСИ

"___" __________ **2021 й.** Жиззах шахар (туман)

Катнашдилар: -
Буюртмачи вакили: -

Экология ва атроф-муҳит муҳофазаси бошқармаси Зомин туманидан - Шукобуров
шаҳар (туман) инспекцияси вакили
Сангзор МФЙ раиси Д. Касимова

Қўшни худуд корхона вакиллари:

1.
2. -
3. -

Объект худудига яқин масофада истиқомат қилувчи аҳоли: -

1. Музаффаров Ш -
2. Мурадова Р -
3. Каримов А -
4. Шодиева С -
5. Эшбоева С -
6. Хайитбоев Д -
7. Хасанов Ш
8. Шонезродов С
9. Худайназаров Ш
10. Жураев Шавкат

КУН ТАРТИБИ

Жиззах сув таъминоти ИИБ томонидан Сангзор МФЙ

(буюртмачининг номи)

*(объект манзили)***худудидарежалаштирилаётган (мўлжалланаётган, амалга оширилаётган)** ичимлик сув тармоғи **фаолиятинингэкологик талабларга**

(фаолият тури)

мувофиқлигини белгилаш ҳамда экологик экспертиза объектини рўёбга чиқариш мумкинлиги юзасидан жамоачилик фикрини ўрганиш тўғрисида.

Кун тартибидаги масала юзасидан қуйидаги маълумотлар тақдим этилди.

Обьект жойлашган майдон _____м^{2}ни ташкил қилиб,чегараланиши куйиидагича:

шимол томондан: _____;

шарқ томондан: _____;

ғарб томондан: _____;

жануб томондан: _____;

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: _____м.

Объект буюртмачининг *балансида* ёки *ижарада*.

Объект _____

_____

_____

_____.*

** янгидан ташкил этилаётган экспертиза объекти ёки фаолият кўрсатаётган объект реконструкция, модернизация қилинган, қайта ташкил этилган, кенгайтирилган ёки жойлашуви ўзгартирилганлик тўғрисидаги маълумотлар киритилади.*

Ҳудудда мавжудўсимликлар дунёси бўйича тўлиқ маълумот:

Ўсимликларнинг умумий сони:_____ туб дарахт ва ____ туб бўта мавжуд бўлиб, шундан:

№	Дарахт тури	Диаметри	Бўйи	Холати
1.				
2.				
3.				
....				
№	**Бўталарнинг турлари**	**Диаметри**	**Бўйи**	**Холати**
1.				
2.				
3.				
...				

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолиятни рўёбга чиқарилиши натижасида:

ҳудудда мавжуд бўлган _____ туб дарахт ва ____ туб бўта кесилиши;

қўшимча ____ м2 ҳудуд кўкаламзорлаштирилиши кўзда тутилган.

Ўзбекистон Республикаси Вазирлар Маҳкамасининг 2021 йил 7 сентябрдаги 541-сон қарорининг 1-иловаси билан тасдиқланган фаолият турларининг рўйхатига мувофиқ режалаштирилаётган(мўлжалланаётган, амалга оширилаётган)фаолият тури___ - тоифага мансуб.

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган)фаолият учун

танланган ер майдонига нисбатан яқин масофада сув объекти (дарё, сой, сув омбори ва бошқа сув ҳавзаси)нинг мавжудлиги:

_____ - сув объекти танланган ер майдонидан ____ м узоқ масофада жойлашган.

Фаолиятни амалга ошириш натижасида йилига __ м^3 миқдорида оқава, __ м^3 маиший чиқинди ҳамда __ м^3 қурилиш чиқиндилари ҳосил бўлиб, улар қуйидаги тартибда бартараф этилади:

Ҳосил бўлган чиқиндилар „Toza hudud" DUK билан шартнома асосида олиб чиқиб кетилади.

(чиқиндиларни ташиб кетиш, оқаваларни тозалаш ва уларни ташланиши тўғрисида маълумот)

Кун тартибидаги масала атрофлича мухокома килиниб, жамоатчилик назорати (эшитуви) иштирокчилари қарор қилади:

„Jizzax suv ta'minoti" MCHJ томонидан „Sangzor" MFY
(буюртмачининг номи) *(обьект манзили)*ҳудудида
режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) ичимлик сув тармоғи фаолиятининг экологик талабларга
(фаолият тури)
мувофиқлигини инобатга олиб, танланган ер майдонида фаолиятни ташкил этиш ва юритишга розилик билдиради.

ёки,

_____ томонидан _____
(буюртмачининг номи) *(обьект манзили)*ҳудудида
режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) _____ фаолиятининг экологик талабларга
(фаолият тури)
мувофиқ бўлмаганлиги сабабли, танланган ер майдонида фаолиятни ташкил этишни рад этади.

Қабул қилинган қарорларни тўғри деб имзо чекувчилар:

Буюртмачи вакили: -

Экология ва атроф-муҳит муҳофазаси бошқармаси _____ шаҳар (туман) инспекцияси вакили Sangzor МФЙ раиси -

Қўшни худуд корхона вакиллари: -

1. -
2. -
3. -

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: -

1. Muzaffarov Sh -
2. Murodova D -
3. Karimov A -
4. Shodiyev S -
5. Ergashev S -
6. Xaitboyev D -
7. Shomurodov S -
8. Hasanov M -

Toshlihol mahalla

Давлат экология қўмитаси
раиси ўринбосарининг
2021 йил "14" октябрдаги
04-01/10-281- сон топшириғига ил

Жиззах сув таъминоти МЧЖ
(буюртмачининг номи) **томонидан**

Тошликон МФЙ **ҳудудида**
(обьект манзили)

ичимлик сув тармоғи **фаолиятини**
(фаолият тури)

ташкил этиш бўйичаўтказилган жамоатчилик назорати (эшитуви)

ХУЛОСАСИ

"___" _____ 2021 й. Жиззах **шаҳар (туман)**

Катнашдилар: -
Буюртмачи вакили: -

Экология ва атроф-муҳит муҳофазаси бошқармаси бош мутахассиси. Н. Исмоилов.
шаҳар (туман) инспекцияси вакили Т. Халмуратова
Тошликон МФЙ раиси -

Қўшни худуд корхона вакиллари: -

1. -
2. -
3. -

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: -

1. Сапаев Р. -
2. Тожибоев М. -
3. Мавлянов О. -
4. Шагабудинова Х. -
5. Гоибўпатова С. -
6. Бахромов С. -
7. Мавлянов Р. -
8. Гоибазарова Ю. -
9. Ахарбоева М. -
10. Эшмонов Ж. -

КУН ТАРТИБИ

Жиззах сув таъминоти ИИБ томонидан Тошлоқ МФЙ

(буюртмачининг номи)

(объект манзили) **ҳудудидарежалаштирилаётган (мўлжалланаётган, амалга оширилаётган)** ичимлик сув таъминоти **фаолиятининг***(фаолият тури)* **экологик талабларга мувофиқлигини белгилаш ҳамда экологик экспертиза объектини рўёбга чиқариш мумкинлиги юзасидан жамоачилик фикрини ўрганиш тўғрисида.**

Кун тартибидаги масала юзасидан қуйидаги маълумотлар тақдим этилди.

Обьект жойлашган майдон _____м^{2}ни ташкил қилиб,чегараланиши куйиидагича:

шимол томондан: _____;

шарқ томондан: _____;

ғарб томондан: _____;

жануб томондан: _____;

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли: _____м.

Объект буюртмачининг *балансида* ёки *ижарада*.

Объект _____

_____

_____

_____.*

** янгидан ташкил этилаётган экспертиза объекти ёки фаолият кўрсатаётган объект реконструкция, модернизация қилинган, қайта ташкил этилган, кенгайтирилган ёки жойлашуви ўзгартирилганлик тўғрисидаги маълумотлар киритилади.*

Ҳудудда мавжудўсимликлар дунёси бўйича тўлиқ маълумот:

Ўсимликларнинг умумий сони:_____ туб дарахт ва ____ туб бўта мавжуд бўлиб, шундан:

№	Дарахт тури	Диаметри	Бўйи	Холати
1.				
2.				
3.				
....				
№	**Бўталарнинг турлари**	**Диаметри**	**Бўйи**	**Холати**
1.				
2.				
3.				
...				

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) фаолиятни рўёбга чиқарилиши натижасида:

ҳудудда мавжуд бўлган _____ туб дарахт ва ____ туб бўта кесилиши;

қўшимча ____ м2 ҳудуд кўкаламзорлаштирилиши кўзда тутилган.

Ўзбекистон Республикаси Вазирлар Махкамасининг 2021 йил 7 сентябрдаги 541-сон қарорининг 1-иловаси билан тасдиқланган фаолият турларининг рўйхатига мувофиқ режалаштирилаётган(мўлжалланаётган, амалга оширилаётган)фаолият тури___ - тоифага мансуб.

Режалаштирилаётган (мўлжалланаётган, амалга оширилаётган)фаолият учун

танланган ер майдонига нисбатан яқин масофада сув объекти (дарё, сой, сув омбори ва бошқа сув ҳавзаси)нинг мавжудлиги:

_____ - сув объекти танланган ер майдонидан _____ м узоқ масофада жойлашган.

Фаолиятни амалга ошириш натижасида йилига __ $м^3$ миқдорида оқава, __ $м^3$ маиший чиқинди ҳамда __ $м^3$ курилиш чиқиндилари ҳосил бўлиб, улар қуйидаги тартибда бартараф этилади:

Ҳосил бўлган чиқиндилар "Toza Hudud" ДУК билан шартнома асосида олиб чиқиб кетилади.

(чиқиндиларни ташиб кетиш, оқаваларни тозалаш ва уларни ташланиши тўғрисида маълумот)

Кун тартибидаги масала атрофлича мухокома килиниб, жамоатчилик назорати (эшитуви) иштирокчилари қарор қилади:

"Jizzax suv ta'minoti" МЧЖ томонидан Тошликон МФЙ
(буюртмачининг номи) *(обьект манзили)*ҳудудида
режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) ичимлик сув тармоғи фаолиятининг экологик талабларга
(фаолият тури)
мувофиқлигини инобатга олиб, танланган ер майдонида фаолиятни ташкил этиш ва юритишга розилик билдиради.

ёки,

_____ томонидан _____
(буюртмачининг номи) *(обьект манзили)*ҳудудида
режалаштирилаётган (мўлжалланаётган, амалга оширилаётган) _____ фаолиятининг экологик талабларга
(фаолият тури)
мувофиқ бўлмаганлиги сабабли, танланган ер майдонида фаолиятни ташкил этишни рад этади.

Қабул қилинган қарорларни тўғри деб имзо чекувчилар:

Буюртмачи вакили: -

Экология ва атроф-муҳит муҳофазаси бошқармаси Бош мутахассис шахар (туман) инспекцияси вакили
Тошликон МФЙ раиси -

Қўшни худуд корхона вакиллари:

1. -
2. -
3. -

Объект ҳудудига яқин масофада истиқомат қилувчи аҳоли:

1. Сапаев Р. -
2. Тожибоев М. -
3. Мавлянов О. -
4. Шарабуддинова К. -
5. Тошпулатова С. -
6. Бахронов С. -
7. Мавлянов Р. -
8. Тошназарова Ю. -
9. Анарбоева М. -
10. Эшмонов Ж. -

APPENDIX 9. Record of public consultations (List of the participants and photos from meetings)

Meeting List

	Name/Surname of Specialists	Position / Place of work	Contacts
		Khiva City	
1	Babaev Khamidjon Atabayevich	1st Deputy Khokim of Khiva	
2	Doniyor Djabbarov	Khiva district road	
3	Alisher Umirov	Road Engineer	
4	Farukh	Chief architect	
5	Umid	Vodkhoz along the Palvan canal in a part of Khiva	
6	Otojon	Irrigation department	
7	Ilkhombek Bobozhonov	Environmental Inspector of Khiva	
8	Shahriddin Abdullaev	Specialist – architect	
9	Murodjon Metkarimov	Deputy Chief Architect	
10	Farkhod Zhonibekov	Head of City Renewal	
11	Umid Shakirov	Head of the city cadaster	
12	Fakhriddin Abdullaev	Specialist architecture	
13	Arslon Ernazarov	Chief Engineer, Toza Hudud Regional	
14	Mardon	Khiva Khokimiyat	
		Yangiyer City	
15	Nurbek Kurbanov	Deputy Mayor on Investment issues	
16	Hayot Shodmonkulov	Head of City Department of Environmental Protection	
17	Bakhrom Hudayberdiyev	Head of Toza Hudud	
18	Azamat Tadjibayev	Cadaster Department Engineer	
19	Adkham Karabayev	Head of City Architecture Department	
20	Olimjon	Accountant of Toza Hudud	
		Havas City	
21	Uchkun Kamolov	the Mayor of Havas district	
22	Zokirjon Babayev	1st Deputy Mayor of Havas district – IUDP responsible	
23	Bekzod Berdiyev	Deputy Mayor of Havas district, Mayor of Havas city	
24	Khakim Mallayev	Deputy Mayor of Havas district on Investment issues, IUDP responsible	
25	Ulugbek Isakov	Chief architect of the district	
26	Saydullo Khayrolloyev	Investment department	
		Gulistan city	
27	Feruza Tulkinivna	Head of Laboratory of Syrdarya SES	
		Djizzakh city	
28	Komil Kholmurodov	The Mayor of Djizzak city	
29	Shahboz Kamalov	Deputy Mayor on Investment issues, IUDP responsible	
30	Oybek Usmanov	Head of department on investment issues, IUDP responsible	
31	Mamadjon Khasanov	Ittifoq Makhalla Head	
32	Djamshid Khasanov	Head of City Department of Environmental Protection	
33	Nosir Eshkobilov	Senior Specialist of City Department of Environmental Protection	
34	Bunyed	Deputy Director of Toza Hudud	

	Name/Surname of Specialists	Position / Place of work	Contacts
35	Ramzitdin	Chief accountant of Toza Hudud	[redacted]
36	Ulugbek	Head of Sharof-Rashidov dumpsite	
37	Ulugbek	Head of Laboratory of Djizzak SES	
38	Sherzod	Laboratory Assistant	
39	Akhmad	Chief Physician of Djizzak SES	
40	Bobur Rahmonberdiev	Chief Engineer of Djizzak Suvloyiha	
41	Olim Ravshanov	Deputy for the operation of pumping stations/Head of the production and technical department	

Photos

Public Consultation and distribution of leaflets

Djizzak city, September 24, 2021

Djizzak city, September 24, 2021

Djizzak city, September 24, 2021

Djizzak city, September 24, 2021

Djizzak city, September 24, 2021

Meetings held

Meeting with Djizzak SCEEP branch representatives (August 18, 2021)

Meeting with Djizzak SES representatives (August 18, 2021)

Meeting with mahalla representative (May 22, 2021)

APPENDIX 10. National requirements for buffer zone for underground water intakes

Sanitary protection zones should be provided for all designed and reconstructed water pipelines for household and drinking purposes in order to ensure their sanitary and epidemiological reliability.

The zone of the water supply source at the point of water intake should consist of three zones: the first - strict regime, the second and third - restriction regimes.

On the territory of the first belt of the zone of an underground source of water supply, sanitary measures should be provided:

- The territory should be planned, fenced and landscaped
- The territory should be provided with a sentry (alarm) signaling.

a. prohibited:
   - all types of construction, except for the reconstruction or expansion of the main water supply facilities (auxiliary buildings not directly related to the supply and treatment of water should be located outside the first zone of the zone);
   - placement of residential and public buildings, accommodation of people, including those working on the water supply;
   - laying of pipelines for various purposes, with the exception of pipelines serving water supply facilities;
   - release of sewage into surface sources, bathing, watering and grazing, washing clothes, fishing, using pesticides and fertilizers for plants;

b. buildings should be sewerage with wastewater disposal to the nearest household or industrial sewage system, or to local treatment facilities located outside the first zone of the zone, taking into account the sanitary regime in the second zone. In the absence of a sewerage system, waterproof cesspools should be arranged, located in places that exclude contamination of the territory of the first belt when removing sewage.

c. only thinning and sanitary felling are allowed.

In the second zone of the underground water supply source, it is prohibited:

a. pollution of territories with sewage, garbage, manure, industrial waste, etc .;

b. placement of warehouses for fuels and lubricants, pesticides and mineral fertilizers, storage tanks, sludge storages and other facilities that can cause chemical pollution of water supply sources;

c. placement of cemeteries, cattle burial grounds, sewage fields, fields filtration, agricultural irrigation fields, manure storages, silage trenches, livestock and poultry enterprises and other objects that can cause microbial contamination of water supply sources;

d. the use of fertilizers and pesticides.

The sanitary measures carried out in the second zone of the zone should include:

- identification, plugging or restoration of all old, inactive, defective or improperly operated wells and shaft wells that pose a risk of contamination of the aquifer in use;
- regulation of new well drilling;
- prohibiting the pumping of waste water into underground strata, underground storage of solid waste and the development of the earth's interior, as well as the elimination of absorption wells and shaft wells that may pollute aquifers.

On the territory of the third zone of the underground water supply source, the following sanitary measures should be envisaged:

a. to regulate the allocation of territories for settlements, medical and preventive and health-improving institutions, industrial and agricultural facilities, as well as possible changes in the technology of industrial enterprises associated with an increase in the degree of danger of pollution of water supply sources with wastewater;

b. placement of warehouses of fuels and lubricants, pesticides and mineral fertilizers, storage tanks, sludge storages and other facilities that can cause chemical pollution of water supply sources.