KYRGYZ REPUBLIC

COMMUNITY DEVELOPMENT AND INVESTMENT AGENCY

SUSTAINABLE RURAL WATER SUPPLY AND SANITATION DEVELOPMENT PROJECT

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Rehabilitation of water supply system

Darkhan subproject

August 2018

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1. INTRODUCTION. DESCRIPTION OF THE PROJECT AREA, WATER SYPPLY SYSTEM.

Introduction

The objective of Sustainable Rural Water Supply and Sanitation Development Project (SRWSSDP)[1] is to improve access and quality of water supply and sanitation services in the Participating Rural Communities; and to strengthen capacity of the Recipient's institutions in the water supply and sanitation sector.

An Environmental and Social Management Framework (ESMF) for the project consistent with Environmental Assessment (OP 4.01) requirements was prepared and found satisfactory by the World Bank. The ESMF public consultations were held on February 11, and June 23, 2016 in Bishkek and February 16, June 24 2016, in Osh –including participants from each target rural community. The final ESMF documents in both Russian and English languages were disclosed in country and on the Bank Infoshop on July 4, 2016 and July 6, 2016 respectively. Each activity to be financed under the project will be reviewed for safeguards risks in line with OP4.01, and must obtain the clearances required by Kyrgyz national regulations.

The ESMF covers procedures and mechanisms that will be triggered by the Project to comply with the World Bank Policy 4.01 Environmental Assessment2, legislation and normative and legal acts of the Kyrgyz Republic governing preparation and implementation of environmental protection requirements.

The present Environmental and Social Management Plan (ESMP) outlines environmental impacts and mitigation measures related to the rehabilitation of water supply investments in Darkhan subproject.

ESMP activities will be included in bidding and contract documents as integral part of both construction and technical supervision phases.

Description of the project area

Darkan" village of Jety-Oguz region of Issyk-Kul oblast is situated 40 km from Karakol city. Darkhan village is located on a complex relief with a great difference in altitude marks. There are 1935 households with total population of 7377 people in the village. The number of cattle is 4274, small cattle - 20049, horses – 2390.

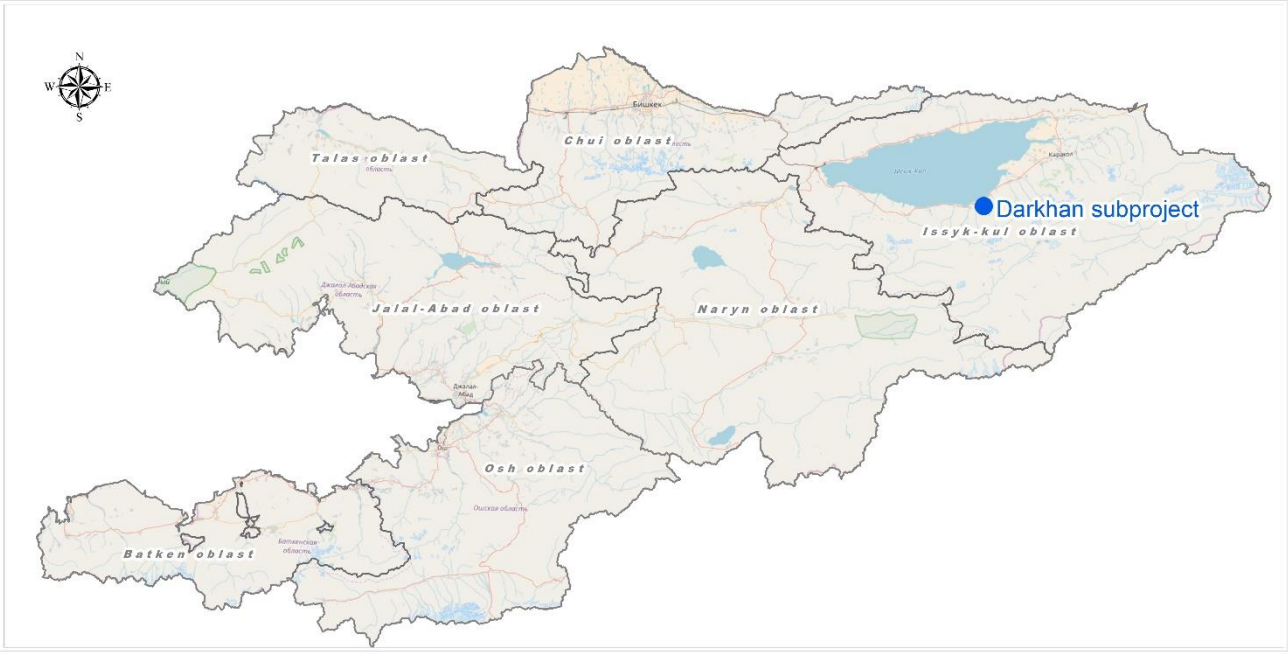
The following municipal objects are located in the village: two secondary schools, kindergarten, clubhouse, office, sports complex, cultural center, information center, post office, rest home, and mosque. At present time all the municipal objects are connected to the water supply system. Water at all the municipal objects is used only for household-drinking needs.

According to data of "Kara-Kol" weather station the climatic characteristics of the region are assumed as follows:

Absolute minimum of temperature, t°C	*-22°C*
Absolute maximum of temperature, t°C	*+35°C*
Average temperature of the coldest days, t°C	*-15,5°C*
Average temperature of the coldest period	*-12,5°C*
Amount of precipitations per year	*420 mm*
Maximum snow depth	*58 cm*
average	*21 cm*
Maximum penetration depth of zero isotherm under natural snow cover	*130 cm*

[1] In accordance with the proposal of ARIS and Department of Water Supply and Sanitation (DWSS) the project name was changed from RWSSP-3 (Third Rural water supply and sanitation project) on SRWSSDP (Sustainable Rural Water Supply and Sanitation Development Project)

Seismicity of the region *9 points*



Water supply system

The water supply source for Darkhan village is a drainage system with feeding from Juuku-Suu river, productivity of which in summer is about 700 m^3/day. The total length of drains is about 650 m. Drain with dy500mm and 400 m long was constructed in 1995; due to water shortage in 2004 the water intake was rehabilitated and a new drain was built upstream with a length of 250 m dy200mm. According to RPAPWC representative drains are littered up with root system of cane and other plants.

But in autumn and winter the drain productivity falls and is about 100 m^3/day, as a result of which additional water is fed from Jylma-Suu river by an open mode. As the additional water by open mode gives the main water flow for the village needs, the water flow from the drain with insufficient (low) discharge is backed and simply stands.

Water quality is regulated by CDWUU by chlorine disinfection directly in the reservoir. Water analysis are given in the initial Report, but according to visual inspection it has a low rate/quality. This factor is one of the main indicators to change technical decisions on water intake and substitute it to water supply obtained from the boreholes.

A site of the reservoirs

At the reservoirs site there are two reservoirs of underground ferroconcrete version with a volume of 250 m^3 each built in 1972. On the moment of inspection the reservoirs operated in a mode of contra-reservoirs. Technical conditions of the reservoirs are satisfactory, but rehabilitation of inlet and outlet networks is needed.

On the site there is a building of the chlorination plant, which is in an unsatisfactory state. On the moment of inspection water comes to the consumers beside the chlorination plant and is chlorinated directly in the reservoirs. There is no lodge house on the site, new fence and gates are needed.

Water conduits

From the drainage water intake water is supplied to the village system by three water conduits dy100mm with a length of 350 m. From a distribution unit water is supplied to the reservoirs site by two water conduits dy300 mm.

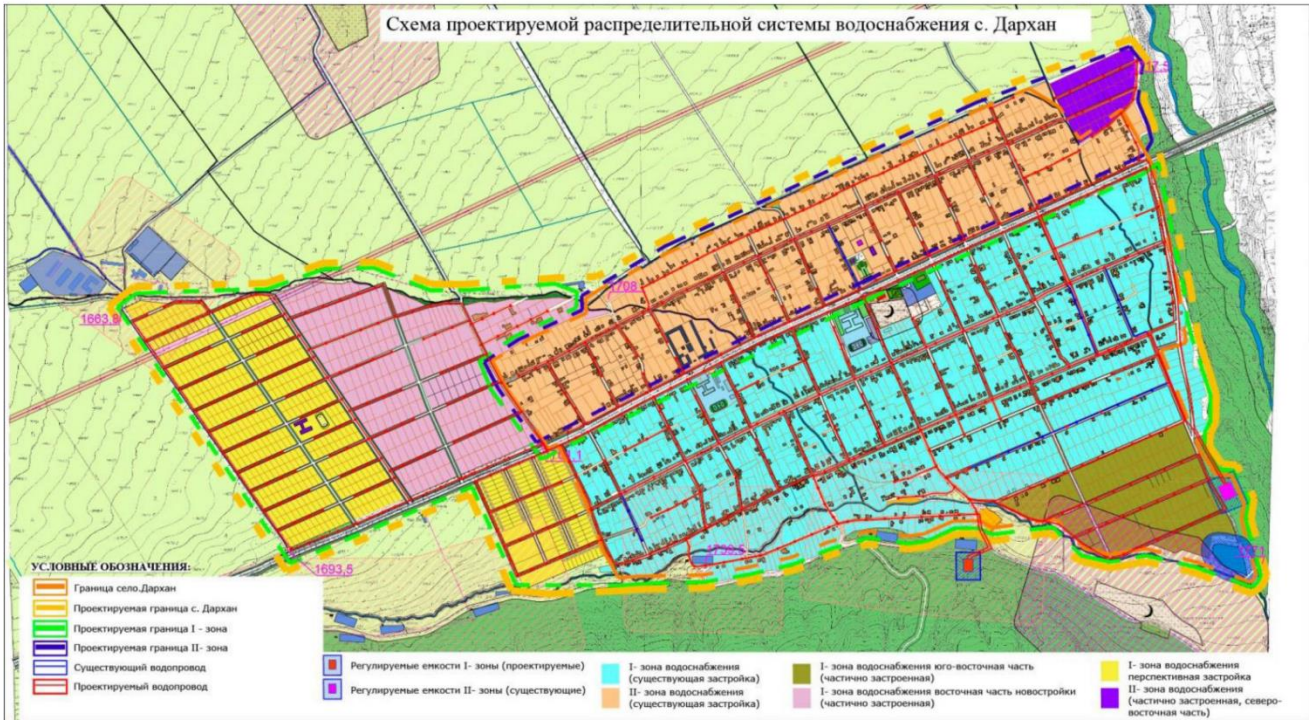
Village networks

The existing distribution networks of Darkan village built in the last century and intended for household-drinking and fire-preventing water supply, due to long operation, were rehabilitated in 2004 by coaxial laying. Polyethylene pipes with smaller diameter d 63-75 mm were mounted in the existing asbestos-cement pipes. As a result, the village remained without any technical possibility to solve questions of external firefighting and the system restrictedly supplied water only for household-drinking needs.

At present time the pipes capacity does not correspond to the required parameters of the necessary quantity of water for household-potable needs of the population. Therefore, at maximum hours of water pumping water does not reach the lower part of the village.

Design scheme of water supply

Проектная схема водоснабжения



2. SCOPE OF WORKS AND IDENTIFICATION OF ASSOCIATED ENVIRONMENTAL AND SOCIAL IMPACTS

Planned activities in Darkhan village:

1. Drilling 1 borehole with a depth of 170 m.
2. Installation of a pipe with adjustable speed drives
3. Construction of fence for sanitary protection zone
4. Rehabilitation of the areas with existing reservoirs with a volume of 500 m3 and chlorination plant
5. Construction of one reservoir with a volume of 700m3 and chlorination point
6. Construction of water conduits L=2000 m from the water intake to reservoirs.
7. Construction of water conduits Ø250mm L=315m and Ø160mm L=1700 m to connect the reservoirs to village networks

The estimated period of construction and rehabilitation works is 12 months. The defects liability period is 12 months.

Darkhan subproject will not finance any activity with significant or irreversible environmental impacts, and therefore has triggered OP 4.01 with classification as Environmental Category "B."

Handling of asbestos-containing materials (ACM).

Visits to the Darkhan sub-project site showed that the existing water distribution network is made of asbestos cement (AC) pipes. During water system rehabilitation, existing asbestos cement pipes will not be removed. Every effort will be made to leave the old pipes in the ground. New pipelines will be installed parallel to the existing ones. In the event of removal of asbestos cement pipes asbestos contained materials waste will be collected, transported and finally disposed by applying special protective measures in accordance with the hazardous waste handling standards. See Section 6 for detailed information on disposal of asbestos-containing materials.

Environmental oversight

During activities implementation, safeguard specialist of ARIS will have overall supervision responsibility for ensuring that the measures indicated in the ESMP are being properly performed. Safeguard specialist and engineers of ARIS in collaboration with the local authorities and the Kyrgyz Forestry and Environment Preservation Agency will perform the activity’s environmental monitoring during both construction and operation phases.

The subproject will not finance Category-A activities, will not support activities that target natural habitats or protected sites, and will not finance those activities that can cause a significant loss or degradation of any significant natural habitat.

SOCIAL RISKS AND IMPACT MITIGATION

Social screening and mitigation

During the social screening, the main risks were identified:

- possible industrial injuries of the local population and workers;
- community dissatisfaction regarding the suspension of utility services;
- involvement of women in the project;
- problems with connections to the water supply network of the poor;
- potential social resistance to tariff increase
- limited capacities of local authorities
- actual delay in implementation

Section 4 describes social impact minimization measures, institutional responsibility and monitoring.

There are no significant social risks in this subproject. The activities planned under this subproject will have more positive social consequences.

An integral part of the strategy is to inform and take into account the views of communities and persons affected by the project. Thus, one of the main tools to prevent social risks / conflicts is the Beneficiary Feedback Mechanism, through which information is exchanged, is taken into account the views of communities at all stages of the project.
Below full information on BFM is provided.

Demographic data. The summative demographic data is as following: target population is 7377 people, including 3589 men and 3788 women. The total number of households is 1935. The main business activities are farming, agriculture. Women in the village are housewives mostly.

Ethnic composition: 100% are Kyrgyz. The risk of interethnic conflict is excluded.
In addition to information-provision, ARIS will collaborate with the Ayil Okmotu and the local community organizations dispute resolution set-ups such as court of aksakals overseen by the AO.

The subproject will not impact cultural or national heritage monuments.

Involuntary Resettlement. Land allotment and resettlement issues are covered by the World Bank OP 4.12 Involuntary Resettlement. As for involuntary resettlement, no significant impacts that could require land allotment, economic displacement or physical resettlement have been identified.
Resettlement policy framework (RPF) was prepared for the project. The RPF public consultations were held on including participants from each target rural community. The RPF provides guidance on the preparation of resettlement action plans (RAPs) during project implementation. The final document is published on ARIS site http://www.aris.kg/ru/proekty_aris/realizuemye_proekty/proekt_ustoichivogo_razvitija_selskogo_vodosnabzhenija_i_sanitarii/politika_pereselenija

The Resettlement Policy Framework (RPF) provides guidelines for development of appropriate mitigation measures, including compensations for mitigation and reparation of the damages due to impacts of land acquisition and resettlement, caused by future project activities.

RPFs are applicable to all RWSSDP sub-projects, which may have impacts in the form of:

- Resettlement or loss of shelter;
- Loss of assets or access to them;
- Loss of income sources or means of subsistence, regardless of the fact, whether people affected by the project impact (PAPs) are forced to resettle.

In case of allotment of land, relocation or damage to the assets of the population, a Resettlement Action Plan will be prepared guided by the RPF. Section 3.2 of RPF describes eligibility criteria and right to compensation.

INSTITUTIONAL RESPONSIBILITY

№	Responsible Party	Activities
1	Ministry of Finance	In case of lack of replacement land, the Ministry of Finances will pay compensation for land and assets of PAPs as stipulated in the RAP.
2	Municipalities of subprojects	Inform of stakeholders. Fulfill the provisions of agreement. Render of assistance during public consultations. Grievance redress in the course of RPF/RAP implementation.
3	Safeguards Specialist/Consultant	• Consultations with PAPs • Identification of PAPs, examination of documents of entitlement and list of affected assets • Preparation of RPF and RAPs allowing for the fact that all expenses for acquisition of land and resettlement will be included in the budgets of the Ministry of Finance • Disclosure of information about RPF and RAP • Implementation of RPF and RAP • Conduction of socio-economic survey of PAP • Monitoring • Submission of information about RPF and RAP to the World Bank • Grievance Management
4	Grievance Redress Mechanism (Beneficiary Feedback Mechanism (BFM))	Obtaining prompt, objective information, evaluating and reviewing appeals (applications, proposals, complaints, requests, positive feedbacks)

No trees owned by the municipality will be cut down until all necessary permits obtained. In the event of cutting municipal trees, there will be compensation in the form of seedlings (the amount for compensation is in the BoQ). The contractor will give seedlings to AO, and they will be planted in the places where the AO points out.

In the event of cutting private trees, the RAP will be prepared according to OP 4.12. If there will be cutting of trees of several owners, it will be possible to prepare a single RAP for subproject. As for the impacts on private properties, no private land will be affected because all water transmission and distribution lines will be installed on municipal land.
Conclusion: some private trees will definitely need to be cut; private lands will not be affected.

Grievance Redress Mechanism (Beneficiary Feedback Mechanism (BFM))
ARIS use an information system for management of appeals, including complaints of citizens – Beneficiary Feedback Mechanism (BFM).

The main objective of the beneficiary feedback mechanism is the process of obtaining prompt, objective information, evaluating and reviewing appeals (applications, proposals, complaints, requests, positive feedbacks), at all stages of CSP implementation that come from citizens / beneficiaries to further improve their work. Strengthen communication with project beneficiaries and provide channels for feedback, and identify and address problems, increasing transparency and accountability.

Dissemination of BFM:
• presentation of information by the BFM specialists to local authorities, AO, deputies of the local kenesh;
• presentation of information at public hearings, trainings conducted by ARIS staff, the BFM team conducts an entire information campaign in the communities;
• banners of BFM are placed on social facilities (schools, kindergardens, FAP);
• there are banners in district administrative buildings;
• there is BFM section on the official site.

All appeals and complaints from citizens received under the SRWSSDP deliversdelivers to the corporate system for further processing and follow-up.

Channels for submitting an appeal.

1.Hotline (calls are received around the clock, the conversation will be recorded); 2. WhatsApp (instant messaging system for mobile devices with voice and video support); 3. Social networks (Facebook); 4. E-mail address: bfm@aris.kg. 5. ARIS website: www.aris.kg 6. Verbal or written appeals received during the on-site working meetings; 7. Incoming correspondence via courier to ARIS reception; 8. Incoming correspondence by e-mail.	1. Appeals are recorded in the log of BFM incoming correspondence and are considered if the following information is present: • Full Name; • address of registration and residence or telephone number; • content of the appeal; • other reference information. 1.1 In case if the appeals were received in the absence of any of the above data, it is recorded in the log of incoming correspondence of the BFM and the sender is notified, and the results of the appeal will be published in the media at the local level, on the ARIS website or made public at the session of the AK. 2. Appeals are entered into the BFM configuration in the 1C system for analysis and monitoring. 3. Appeals may be submitted anonymously. Confidentiality shall be insured in all cases, even if the applicant is known, in order to avoid conflicts of interested parties.

Receiving an appeal. When receiving an appeal, the following is determined:
- Type of appeal
- Category of appeal
- Persons responsible for review and execution of appeal.
- Deadline for appeal resolving.
- Agreed actions

After the type of treatment is determined, the BFM specialist registers details regarding the treatment in the incoming correspondence journal, and then in the BFM configuration of the 1C system.

The applicant will receive a notification in which the BFM specialist will inform by phone or through other BFM channels:

- Full Name of the executor (project officer) to whom the appeal was forwarded;
- Deadline for execution (minimum 10 days, maximum 30 days from the registration date);
- The deadline and actions are determined in accordance with the ARIS instructions for handling appeals.

Notification. Notification will be registered in the outgoing correspondence log. BFM specialist will assist the applicant at all stages of considering his appeal and ensure that his appeal is properly handled.

In case if the citizen / beneficiary is not satisfied with the decision resulting from the consideration of the appeal, he / she has the right to appeal claim. Appeal claim is considered by the special ARIS Review Committee on consideration of appeals. ARIS Executive Director will form the Review Committee for consideration of appeals from project managers and heads of departments, who will conduct hearings of appeal claims. The Appeals Review Committee will consist of 15-17 persons, of which 2 are BFM members and 2 are persons independent from the project implementation units and the Government of the Kyrgyz Republic.

After review of the appeal, the citizen / beneficiary unsatisfied with the solution received, has the right to appeal the decision in a judicial procedure.

3. ENVIRONMENTAL LEGISLATION

The main normative documents governing the environmental protection activities under Darkhan subproject are[3]:

- **The Constitution of the Kyrgyz Republic 2010**
- **The Law "On Environmental Protection"[4]**
- **Law on Environmental Expertise[5]**
- **The Law of KR "On General Technical Regulations on Ensuring Ecological Safety in the Kyrgyz Republic"[6]**
- **The Law of KR "On Water"[7]**
- **The Law of the KR "On Interstate Use of Water Bodies, Water Resources and Water Management Facilities in the Kyrgyz Republic"**

Over laws and normative acts on environmental protection can be found at http://www.nature.gov.kg/lawbase/index.htm.

[3] The documents below are described in the main ESMF document for the Sustainable Rural Water Supply and Sanitation Development Project.

[4] Dated June 16, 1999 #53 (with amendments and additions dated February 4, 2002 #22; June 11, 2003 # 101; August 11, 2004 # 113; August 6, 2005 # 124; April 27, 2009 # 131).

[5] Dated June 16, 1999 # 54 (with amendments and additions dated June 11, 2003 # 102; February 26, 2007 # 21)

[6] Dated May 8, 2009 # 151 (with amendments and additions dated March 6, 2012 # 19)

[7] Dated January 14, 1994 # 1423- XII

4. ENVIRONMENTAL AND SOCIAL MANAGEMENT/MITIGATION PLAN

Environmental and Social Elements	**Impacts and risks**	Proposed mitigation measures[8]	Institutional responsibility for mitigation (Cost of mitigation activities)[9]	Monitoring
Construction period				
Physical Environment				
Noise	***During the construction phase,*** sources of temporary noise will be the engines of construction and road equipment. Noise levels can also increase temporarily along the materials supply routes.	The use of noise protection measures should be provided, and the equipment will be equipped with a silencer. Application of vibrator equipment compliant with standards and vibration- and noise-protection equipment. Equipment will work from 08.00 a.m. to 06.00 p.m. only, no operations will be carried out during night hours. During operations, covers of engines and generators, air compressors and other driving mechanisms should be closed; equipment should be located at the maximum distance from residential premises. Noise levels during the construction phase, considering that day-time operations only are planned, will not exceed the existing sanitary standards on maximum and equivalent noise levels. There will be no sources of noise *during the operational phase*.	Criteria / specifications to be incorporated into bidding and contract documents. It is not considered as a separate cost item	Field technical supervision engineer of ARIS is responsible to monitor and supervise the activities, including monitoring of potential environmental risks. Representative of contractor is responsible to execute the mitigation measure. Safeguard specialist and infrastructure engineer of ARIS are responsible for overall oversight.
Pollution Soil and water pollution	Pollution of soil and water by the product (sediment) of water treatment or during leakage detection; pollution of	Use proper agreed placement sites only. Basic proper construction norms and standards applied during the construction period	Criteria / specifications to be incorporated into bidding and contract documents.	Field technical supervision engineer of ARIS is responsible to monitor and supervise the

[8] Activities requiring financial expenses are to be included in BoQ.

[9] Cost of mitigation activities is defined by a contractor in relevant items in bidding documents.

	water with oil products from machinery use The following types of work will be carried out during the construction phase: -earthworks: cut and fill, backfill, levelling; -construction equipment operation; - solid waste generation;	Daily checks of machinery of leaking of oil; ban to wash machinery at construction site. Topsoil removal for further use during restoration works Landscaping in accordance with the project.	It is not considered as a separate cost item	activities, including monitoring of potential environmental risks. Representative of contractor is responsible to execute the mitigation measure. Safeguard specialist and infrastructure engineer of ARIS are responsible for overall oversight.
Air Quality (dust generation)	Dust emissions during retrofitting activities would be minor and temporary. Air pollutant emissions are expected from: - motor vehicles; - electric arc welding; - levelling - drilling operations	Dust prevention measures and good housekeeping practices such as water spraying to prevent dust and use of curtains and screening of the construction area. Use of masks, work gloves and clothes by workers. All vehicles delivering dusty construction materials to the site or removing debris will be enclosed and covered to prevent release of dust. Limitation of the speed of vehicles and selection of relevant transportation routes for minimization of impact on the receptors sensitive to dust. Equipping the machinery transporting granular materials with removable canvas covers. Supply of cement to construction sites in pre-pack hermetic packages. The equipment will be used in certain operations only and will not be present at the construction site all the time. Operation of vehicles with defective fuel system exceeding the norms of toxicity of exhausted gases is not allowed. Burning of construction and domestic waste at working area is prohibited.	Criteria / specifications to be incorporated into bidding and contract documents. Irrigation of dirt roads with water (wet dust suppression of in-site roads and sites) is considered as a separate cost item in bill of quantities.	Field technical supervision engineer of ARIS is responsible to monitor and supervise the activities, including monitoring of potential environmental risks. Representative of contractor is responsible to execute the mitigation measure. Safeguard specialist and infrastructure engineer of ARIS are responsible for overall oversight.

		It is needed to ensure cleanliness of adjacent area, not allowing construction waste to minimize dusting and contamination. All emissions will be temporary and short in duration. It should be noted that construction of facilities will not be simultaneous, but will be carried out consecutively on a step-by-step basis—one facility after another. Therefore, air pollutant emissions during the construction phase will not exceed the existing standards. No pollutant emissions will take place ***during the operational phase***.		
	Use of calcium hypochlorite (bleach powder).	During construction, no chlorine will be used, so the impact is ruled out. During the operational phase, there can be an impact on people who will work with chlorine directly (in the work area). INSTRUCTION *On Purchase, Sale, Storage, Accounting and Transportation of Highly Toxic Substances,* approved by Resolution #513 of the Government of the Kyrgyz Republic of September 21, 1999	Criteria / specifications to be incorporated into bidding and contract documents. It is not considered as a separate cost item.	
Water resources	Borehole drilling Disturbance of surface-water flow. Pollution of groundwater Overwatering of soil	***During the construction phase***, there will be no direct impact on surface waters of the Djuku River. Refuse from excavations beside groundwater occurrence. Working areas with machinery, cement mixers, and fuel tanks are located beyond water protection zones. During the construction phase, there will be no discharges to any water sources. During the operational phase, there will be no impact on surface waters	Criteria / specifications to be incorporated into bidding and contract documents. It is not considered as a separate cost item.	Field technical supervision engineer of ARIS is responsible to monitor and supervise the activities, including monitoring of potential environmental risks. Representative of contractor is responsible to execute the mitigation measure. Safeguard specialist and infrastructure engineer of ARIS are responsible for overall oversight.

Construction waste	Contamination of adjacent area, soil, water resources	Separation of all types of waste streams, reuse and recycling wherever possible Disposal of wastes that cannot be reused or recycled, transport and disposal of wastes at designated landfill site and in cooperation with the local waste management company; no open burning Mineral waste from construction and dismantling works should be separated from common waste and organic, liquid and chemical waste through sorting and keeping in special containers. All documents on waste removal and disposal should be maintained properly as a proof of appropriate management of waste at the site. As for domestic waste, installation of collection tanks and timely removal of waste should be arranged by local SES agencies.	Criteria / specifications to be incorporated into bidding and contract documents. It is not considered as a separate cost item	Field technical supervision engineer of ARIS is responsible to monitor and supervise the activities, including monitoring of potential environmental risks. Representative of contractor is responsible to execute the mitigation measure. Safeguard specialist and infrastructure engineer of ARIS are responsible for overall oversight.
Construction hazardous waste	Some construction debris may contain asbestos	Detailed impact mitigation measures are discussed in Section 6.	Criteria / specifications to be incorporated into bidding and contract documents. It is not considered as a separate cost item Contractor shall develop site-specific measures where requirements to ACM and asbestos waste will be contained.	The contractor needs to train their workers on how to assess presence of asbestos containing materials and to establish a procedure of its safe removal using proper protection equipment, storage without breaking in air-tight containers and management by an authorized agency or company. Field technical supervision engineer of ARIS is responsible to monitor and supervise the activities, including monitoring of potential environmental risks. Representative of contractor is responsible to execute the mitigation measure. Safeguard specialist and infrastructure engineer of ARIS

				are responsible for overall oversight.
Chance findings	Damage and degradation of site structures	In case of chance finds or other significant discoveries during excavation works stop all construction works and inform relevant authorities prior to proceeding		Contractor and Site Supervision Engineer.
Setting up of construction site and removal of site upon completion of works	Possible disturbances decommissioning	Plan to decrease disturbance to surroundings and neighbors (including plans to ensure proper traffic management on access roads to site) Fencing off the site or access to site with proper safety signs After completion of works, site will be restored to previous conditions and all wastes will be cleared in line with the provisions of this ESMP, all machinery will also be removed from site.	Negligible costs Contractor costs	Will be further defined with specifications in the design documents Field technical supervision engineer of ARIS is responsible to monitor and supervise the activities, including monitoring of potential environmental risks. Representative of contractor is responsible to execute the mitigation measure. Safeguard specialist and infrastructure engineer of ARIS are responsible for overall oversight.
Tree and shrub removal during pipeline installation	Trees and shrubs will be cut down or trimmed along the pipeline routes only after all necessary permits from local environmental agencies are obtained, in coordination with local authorities and with due regard to compensatory planting. All permits will be obtained before the start of construction. In the event of cutting municipal trees, there will be compensation in the form of seedlings (the amount for compensation is in the BoQ).The contractor will give seedlings to AO, and they will be planted in the places where the AO points out. In the event of cutting private trees, the RAP will be prepared according to OP 4.12. If there will be cutting of trees of several owners, it will be possible to prepare a single RAP for subproject.		Costs are included in EBOQ (Environmental Bill of Quantities)	Contractor
Topsoil removal	Topsoil removal, transportation, stockpiling and storage at designated location for further use in rehabilitation of disturbed lands.		Costs are included in EBOQ (Environmental Bill of Quantities)	Contractor

General issues	Regular inspections Trainings for staff (workers), safety trainings, other trainings WB safeguards trainings for local authorities, contractors and communities will be continued under SRWSSDP.			Contractor Local authorities and communities (AO, CDWUU) ARIS
Social aspect				
Safety of workers and population	Industrial accidents	Local inspections controlling construction works and environmental safety and local population should be properly notified on forthcoming project works. Local communities will be properly notified on works by means of publications and /or notices in mass media and/or bill boards in public places (and at work sites). All permission required by legislation for use of waste landfill, as well as permissions from sanitary inspection etc. in construction and rehabilitation works at this site, have been obtained. All works will be carried out though safe and discipline methods to minimize negative impact from industrial process on population and environment. Individual protective means should meet safety standards (obligatory application of helmets, protective face masks, when needed, protective glasses, safety belts and boots). Sites will be provided with proper information boards and signs informing the workers about the rules and norms of works to be followed.	Contract organizations	ACSD Field technical supervision engineer of ARIS is responsible to monitor and supervise the activities, including monitoring of potential environmental risks. Representative of contractor is responsible to execute the mitigation measure. Safeguard specialist and infrastructure engineer of ARIS are responsible for overall oversight.
Aesthetics and landscape	Landscape alterations	Use of landscaping methods; minimization (where possible) of major excavations (deep cuts, high fills)	Contractor	Проектный институт ARIS
Land Acquisition and Involuntary Resettlement	Demolition of buildings, resettlement in connection with land withdrawal for construction	Use of procedures outlined in World Bank's OP 4.12 Involuntary Resettlement	The overall coordination of the project will be	ARIS

			provided by ARIS which will oversee all resettlement planning and coordinate all issues relating to the compensation. ARIS will collaborate closely with the local self-government bodies: aiyl okmotu and raion state administration bodies. ARIS is responsible for preparation of RAP. The Ministry of Finances will pay compensation for land and assets of PAPs as stipulated in the RAP.	
Human communities	Suspension of utility services	Timely notification of communities about planned cutoffs; rapid restoration of utility services	Contractor	
	Gender	Equal participation and representation of women throughout the project implementation No less than 30% of meeting/hearing participants will be women. Under the project, it will be suggested to communities that village water committees should be established, with no less than 30% of women included as committee members.	Local government bodies ARIS	ARIS
	Poverty	A subsidy strategy will be developed under the project to connect low-income households to water systems. This strategy will be introduced under each subproject.	Ayil Okmotu (AO) Municipal enterprise on water supply/ CDWUU under ARIs support	ARIS
	Potential social resistance to tariff increase	Social mobilization, awareness raising (welfare activities, community consultations, development and	Ayil Okmotu (AO)	ARIS

		implementation of outreach campaigns). Tariffs will be developed with due regard to the views of communities gathered during public consultations.	Municipal enterprise on water supply/ CDWUU under ARIs support	
	Limited capacities of local authorities	The project allows for a range of capacity building activities and technical assistance to local authorities.	ARIS (under Component 3)	ARIS
	Actual delay in implementation	Delays in the implementation of construction work can cause some discontent. In such cases, explanatory work will be conducted with local communities.	Ayil Okmotu (AO) Contractor ARIS	ARIS
Sourcing of labor and implications of any potential labor influx will be closely monitored by the safeguards consultant and ARIS. Civil works contractors will be advised to recruit necessary labor, where feasible, locally. Labor recruited from outside the community where civil works will be done will abide by a 'code of conduct'.				
Operation period				
Proper Operations		Ensure use of environmentally acceptable fuels Regular technical maintenance Ensure all attests and certificates have been acquired in particular for fire protection and monitoring of emissions/concentrations in air Ensure proper, efficient use of water resource, and avoid water losses, leakages and abusive consumptions – install, operate and periodically verify the water meters for each water user.		Operator of CDWUU, Local authorities (rrepresentative of AO)

5. MONITORING PLAN

Environmental Monitoring Plan

What parameter is subject to monitoring?	**Where** will monitoring of parameter be carried out?	**How** will monitoring of parameter be carried out/type of monitoring equipment	**When** will monitoring of parameter be carried out- frequency	**Monitoring cost**[10] What cost of equipment or expenses of contractor required to conduct monitoring?	**Institutional responsibility for monitoring**	**Date of commencement**
Noise from vehicles and equipment	At the construction and disposal site	Portable noise meters	Continuous	Criteria / specifications to be incorporated into bidding and contract documents. It is not considered as a separate cost items)	1. Inspection of construction sites is carried out by ARIS to ensure compliance with ESMP. 2. State inspectors of Architecture and construction supervision department (ACSD) will supervise fulfillment of design solutions in construction and installation works or reconstruction of facilities, quality of construction materials, structures, and participate in commissioning of completed construction facilities. 3. State ACSD carrying out state environmental supervision have a right to supervise in established procedure on presentation of official identification papers in compliance with environmental provisions, normative quality, environmental protection activities in project implementation. NGO, local authorities (AO, CDWUU), CDWUU operator	After takin over of site possession by contractor .
Soil and water pollution	At construction site	Visual	Continuous			
Air (dust generation)	At and near the construction site	Portable measuring devises	Weekly			
Transport (parking in designated areas, car washing)	At and near the construction site	Visual	Continuous			

[10] Activities requiring financial expenses are to be included in BoQ.

Construction waste (waste storage and disposal)	At construction site	In accordance with the plan and observation	In accordance with the plan but at least weekly			
Decommissioning of construction site	At construction site	Visual	In accordance with the plan			
Safety of workers	At construction site	Visual	Continuous			

6. COLLECTION, STORAGE, TRANSPORTATION AND DISPOSAL OF ASBESTOS-CONTAINING WASTES.

Removal of materials that contain asbestos will be carried out in line with the local legislation, including construction standards, work safety issues, air borne emissions of hazardous pollutants and disposal of waste and hazardous waste (in the event that there is no local legislation, the Directive 2003/18/EC of the European Parliament will be used, that amends and supplements Directive of the Council 83/477/EEC on worker protection from workplace asbestos exposure risks: threshold values of airborne dust particles is 0.1 fiber/cm3; also use the Good Practice Note: Asbestos: Health Issues at Workplace and Community; World Bank). Asbestos materials shall be subject to immediate final disposal/burial under special conditions.

According to Order #885 of the Government of the Kyrgyz Republic *On Hazardous Waste Management in the Kyrgyz Republic* of December 28, 2015, asbestos-containing wastes should be disposed as follows.

The hazardous waste management process (waste lifecycle) consists of the following phases: generation, accumulation (collection, temporary storage, stockpiling), transportation, neutralization, recycling, reuse of recycled products, and disposal.

When asbestos is present at a project site, it should be clearly labeled as a hazardous material. Asbestos-containing materials should not be subject to cutting or breaking as this will result in dust generation. In reconstruction, all workers should avoid crushing/damaging asbestos-containing waste, stockpile such waste at designated locations within the construction site and dispose of it properly afterwards to a special location or landfill.

When asbestos-containing waste is subject to temporary on-site storage, they should be properly contained in leak-tight containers and labeled appropriately as a hazardous material. Safety precautions should be taken to prevent any unauthorized removal of such waste from the site.

Collection and temporary storage of waste

Asbestos waste generation should be minimized by using efficient technologies.

All asbestos-containing materials should be handled and disposed by qualified and experienced personnel only. The personnel should wear appropriate protective equipment (safety masks, gloves and overalls).

The amount of waste stored at the designated site must not be greater than permitted by the standards.

Industrial waste collection sites and access ways must not be blocked up.

When handling asbestos waste, the workers should necessarily wear special protective clothing, gloves and respirators. Prior to removing (if required) asbestos from the site, it should be treated with a wetting agent to minimize asbestos dust emission. Removed asbestos should never be reused.

Keeping foreign items, individual or working clothes, or personal protection equipment, or having meals at waste collection sites is not allowed.

During handling operations, workers must comply with applicable handling requirements and general safety rules. All operations should be carried out mechanically, using labor-saving lifting and transport equipment.

Hazardous wastes should be transported to the landfills by properly equipped vehicles, either own or of a specialized third party carrier. The transport vehicles should be constructed and used in a manner that prevents potential incidents, losses and environmental pollution both on the way to the landfill and when transferring waste from one vehicle to another. All activities that involve loading, transportation and unloading of waste at main and auxiliary sites should be mechanized and use leak-tight equipment. Opening hazardous waste containers during transportation is prohibited.

Solid and dusty wastes should be transported in special containers or containers fitted with gripping devices for unloading by truck cranes. Transporting unpacked asbestos in open trucks or on flat wagons is not allowed.

Using hooks and other sharp tools in handling operations is not allowed.

No one except the driver and staff members authorized to escort the waste off site is allowed to be in vehicles transporting hazardous waste. The drivers of vehicles that will transport asbestos waste must be trained in safe transport requirements.

All operations in connection with loading, transport, unloading and disposal of waste must be mechanized. The waste must be transported in a way to prevent transportation losses and environmental impacts.

Disposal of asbestos waste

Asbestos waste must be disposed to landfills for municipal solid waste or unrecycled industrial solid waste.

7. SUPERVISION AND REPORTING

Field technical supervision engineer must be at the site at all times. In addition, safeguard specialist or infrastructure engineer of ARIS visits construction sites at least once a month in order to supervise fulfillment of ESMP during subproject implementation. More visits may be required if any issues are identified. If there are topical environmental issues, ARIS should continue its supervision during facility operation.

After site monitoring visit report of safeguard specialist should be submitted by coordinator of project In the event of non-compliance with environmental protection measures, a statement specifying the remedial period for contractor should be drawn up.

«Environmental protection» section will be included in regular Progress Reports prepared by field technical supervision engineer and delivered to ARIS. The section should contain compressed information and briefly describe monitoring activities as well as any arising issues and the ways to address them.

The final responsibility for the implementation of the ESMP remains with the Project Implementation Unit (ARIS), as per the World Bank environmental safeguards, the bidding and contractual documentation will allow for the responsibility of implementing specific mitigation measures to be transferred to the contractor from the PIU.

8. PUBLIC CONSULTATIONS

The ESMP public consultations were held on July 26, 2018 in Darkhan village. Heads of AO, staff of CDWUU, headmen, elderlies, deputies of aiyl kenesh and local population took part in public hearings. The total number of participants was 35 people, 14 of them women, that is, 40%. It was observed very active participation of retired women.

The interested parties and the population were provided with information on the technical part of the upcoming subproject, as well the information on the possible social and environmental impacts of the planned construction / rehabilitation of the water supply system.

Information on Beneficiaries Feedback Mechanism was disseminated to all beneficiaries of subproject. ARIS provided information on the scope of Beneficiaries Feedback Mechanism, eligibility criteria for submission of the appeals, procedure of appeal submission (where, when and how), deadlines of response, as well as the privacy principle and the right to submit anonymous appeals.

MINUTES
of public hearings to discuss Environmental and Social Management Plan for rehabilitation of water supply system in Darkhan sub-project under Sustainable Rural Water Supply and Sanitation Development Project (SRWSSDP).

Venue and date: Darkhan v.
July 26, 2018 г. at 11:00 a.m.

Zhusupov N. M. – Head of Darkhan aiyl okmotu opened the hearings after welcoming the participants, and introduced ARIS staff taking part in the project preparation.
Korchubay u. E. – project engineer provided brief information on the project and engineering solutions.
Kerimbekova M. – safeguard specialist presented social and environmental safety measures provided in the project. She provided detailed information on environmental safety, social protection measures. Developed Environmental and Social Management Plan was presented.
Population received full information on Beneficiary Feedback Mechanism (BFM). Beneficiary Feedback Mechanism (BFM) is a process of receiving immediate and objective information, evaluation and review of requests (applications, proposals, complaints, inquiries, positive feedbacks) related to ARIS projects.
Kerimbekova M.: To date Detailed Design and Estimates were developed including "Environmental protection" (EP) section which received positive state ecologic conclusion. Also Environmental and Social Management Plan on reduction of adverse impact was developed in accordance with the World Bank requirements.

Question 1: When will the construction works start?
Answer 1: Construction works are planned to be started in November 2018 after bids and selection of a contracting company. Before that Aiyl Okmotu needs to receive all required documents.

Question 2: If the trees are cut, will the contracting organization carry off these trees?
Answer 2: If municipal trees are cut, they will be given to AO as they are on their balance. Cutting of municipal trees should be correspondingly permitted. The project has foreseen expenses for compensating planting, nursery plants will be delivered to AO and planted in places to be determined by AO.

Question 3: How many boreholes are planned?
Answer 3: According to the detailed design and estimates 1 borehole is planned to be drilled.

Question 4: What type of works will be conducted in our village?
Answer 4: The following types of work is planned under the project:
- Drilling of 1 borehole with a depth of 170 m.
- Installation of pump with adjustable speed drive.
- Construction of fence for protective sanitary zone.
- Rehabilitation of sites with existing reservoirs with a volume of 500 m^3 and chlorination room.
- Construction of one reservoir with a volume of 700 m^3 and chlorination room.
- Construction of water pipes L=2000 m from the water intake site to the site with reservoirs.
- Construction of water pipes Ø250 mm, L=315 m and Ø160 mm, L=1700 m to connect reservoirs to inside village networks.

Question 5: Are the numbers and volume of reservoirs designed for the future?
Answer 5: During the design process all factors such as number of population, daily consumption, population growth etc. and correspondingly number and volume of reservoirs are designed for the future.

Question 6: How will the issue with the violation of "red line" be resolved? There are many cases when private citizens went out of the discharge line?
Answer 6 is given by the head of ayil okmotu: Yes, such situation is met in villages of Kyrgyzstan. In our village many h/h fences went out of the line and it is considered to be illegal. AO is going to take responsibility for this issue, by due process of law, we will move all fences from the municipal

lands. AO will perform this work before the construction period. We are interested in contributing to the project implementation as the construction schedule depends on this as well.

Question 7: There are 2 secondary schools in Darkhan v. Will the issue with their toilets be resolved?
Answer 7: Our project has Component 2 "Sanitation and hygiene development". This component includes construction of inside and outside sanitary facilities in schools and kindergartens. For example, detailed design and estimate documents for rehabilitation of inside sanitary facilities in already started sub-projects such as Kurama, Sultan, Kyrgyz-Ata, Togotoy, is ready and construction has been started. The same works will be conducted in your sub-project as well.

Question 8: Will the documents for construction/rehabilitation of inside sanitary facilities be developed in accordance with the World Bank requirements?
Answer 8: Environmental Management Check-lists be developed for these facilities to be included into bidding documents.

Question 9: Will the water purity comply with the water meters? I will explain my question. Once we have already tried to install water meters but they broke down because water contained sand which plugged the meters.
Answer 9: First of all, water quality will be appropriate, the project passed state technical and ecologic expertise, after drilling water samples will be taken for testing. Secondly, the project foresees obligatory installation of water meters.

Question 10: How will the quality of conducted works be supervised?
Answer 10: Supervision will be conducted by ARIS as well as by State bodies. Project engineer, supervision engineer, safeguard specialist will monitor the whole construction process. From the state part SETI (State Ecologic and Technical Inspectorate) and SAEPF under GKR (State Agency of Environmental Protection and Forestry under the Government of Kyrgyz Republic) will monitor the process of construction.

Question 11: Does the project foresee preservation of topsoil?
Answer 11: Yes, such measures are foreseen: removal of topsoil, transportation and laying into dump banks to store in special allocated places with further use to restore destructed lands.

THE DECISION TAKEN:

Participants of the public hearing supported the subproject for rehabilitation of water supply system in Darkhan and acknowledged it as a vital one to ensure the uninterrupted supply of clean drinking water to the residents of Darkhan aiyl okmotu.

ESMP was approved by the residents the subproject area.

The head of Darkhan aiyl okmotu **Zhusupov N.**

Safeguards Specialist: **Meerim Kerimbekova**

Secretary:

ПРОТОКОЛ

Общественных слушаний по обсуждению
Плана управления окружающей и социальной средой при реабилитации системы водоснабжения в подпроекте Даркан рамках
Проекта устойчивого развития сельского водоснабжения и санитарии (ПУРСВС).

Место и время проведения: с. Даркан
26 июня 2018 г. в 11:00 часов

Джусупов Н.М. – глава аыйл окмоту Даркан открыл слушания, поприветствовал приглашенных и представил сотрудников АРИС, участвовавших в подготовке проекта.
Корчубай у.Э.- инженер проекта, дал краткую информацию о проекте и принятых технических решениях.
Керимбекова М.– специалист по мерам безопасности, представила презентацию о мерах социально-экологической безопасности, предусмотренных в проекте. Подробно рассказала об экологической безопасности, социальных мерах защиты. Был представлен разработанный План управления окружающей и социальной средой.
Населению была представлена полная информация о Механизме обратной связи (МОС). Механизм обратной связи (МОС) является процессом получения оперативной, объективной информации, оценки и рассмотрения обращений (заявлений, предложений, жалоб, запросов, позитивных отзывов), связанных с проектами АРИС.
Керимбекова М.: на данный момент разработана Проектно-сметная документация, в состав которой входит раздел «Охрана окружающей среды (ООС), который получил положительное государственное экологическое заключение. Также был разработан План управления окружающей и социальной средой по снижению на нее воздействия, согласно требований Всемирного Банка.

Вопрос 1: Когда именно начнутся строительные работы?
Ответ 1: Строительные работы планируются начать с ноября 2018 года после завершения тендерных процедур и отбора подрядных организаций. До этого времени Айыл Окмоту необходимо получить все необходимые документы.

Вопрос 2: В случаях вырубки деревьев, вырубленные деревья будет увозить подрядная организация?
Ответ 2: При вырубке муниципальных деревьев, все вырубленные деревья будут отданы АО, так как они находятся на их балансе. Вырубка деревьев, находящихся на балансе муниципалитета будет происходить только при наличии соответствующих разрешений. В проекте заложены расходы на компенсационное озеленение, саженцы будут переданы АО, далее они будут высажены в тех местах где укажет АО.

Вопрос 3: Сколько будет скважин?
Ответ 3: Согласно проектно-сметной документации планируется бурение 1 скважины.

Вопрос 4: Какие именно работы будут проводиться в нашем селе?
Ответ 4: Планируются следующие работы в рамках подпроекта:
Бурение 1 скважины глубиной 170 м.
Установка насоса с частотными преобразователями.
Строительство ограждения зоны санитарной охраны.
Реабилитация площадки существующих резервуаров емк. 500 м3 и хлораторной.
Строительство одного резервуара емк. 700м3 и хлораторной.
Строительство водоводов L=2000м от площадки водозабора до площадки резервуаров.

Строительство водоводов Ø250мм L=315м и Ø160мм L=1700м для подключения резервуаров к внутри поселковым сетям.

Вопрос 5: Количество и объем резервуаров рассчитан на будущее?
Ответ 5: При проектировании были учтены все факторы, такие как количество населения, суточное потребление, прирост населения и т.д., и соответственно количество и объем резервуаров также рассчитан на будущее.

Вопрос 6: Каким образом будет решаться вопрос с нарушением «красной линии», очень много случаев, когда частные лица вышли за линию отвода?
Ответил 6 Глава айыл окмоту: Да, и это ситуация во всех селах Кыргызстана, в нашем селе очень много заборов вышли за линию отвода, и это нелегально. Этот вопрос АО возьмет на себя, в законном порядке, мы подвинем все заборы с муниципальных земель. До начала строительных работ всю данную работу АО проведет. Этот в наших интересах, содействовать реализации проекта, от этого зависит и строки стройки.

Вопрос 7: В селе Дархан имеются две средние школы. Каким-нибудь образом решится проблема с их туалетами?
Ответ 7: В нашем проекте есть компонент 2, который называется «Развитие санитарии и гигиены», в рамках данного компонента будет строительство внутренних и наружных санитарных сооружений в школах и детских садах. Например, для подпроектов уже стартовавших, таких как Курама, Султан, Кыргыз-Ата, Тоготой проектно-сметная документация по реабилитации внутренних санитарных сооружений уже готова, и сейчас уже идет строительство. Те же самые работы будут и в ваше подпроекте.

Вопрос 8: Для строительства/реабилитации внутренних санитарных сооружений вы тоже будете готовить все документы по требованиям Всемирного Банка.
Ответ 8: Для данных объектов будут разрабатываться чек-листы Плана управления окружающей средой, и также будет в составе тендерной документации.

Вопрос 9: Будет ли чистота воды соответствовать тому, чтобы ставить на нее счетчик? Объясню почему я спрашиваю, когда-то у нас пробовали ставить приборы учета воды, но они поломались потому что, в воде был песок, и он засорял счетчики.
Ответ9: Во-первых, качество воды будет соответствующее, проект прошел государственную техническую и экологическую экспертизы, после бурения будут взяты все пробы воды на соответствие. Во-вторых, проект предусматривает обязательную установку приборов воды.

Вопрос 10: Как будет проводиться контроль качества проводимых работ?
Ответ 10: Контроль будет вестись как со стороны АРИС, так и со стороны государственных органов. Инженер проекта, инженер по техническому надзору, специалист по мерам безопасности будут мониторить весь процесс строительства. Со стороны государственных органов мониторинг будет вести ГЭТИ (государственная экологическая и техническая инспекция) и ГАООС ЛХ при ПКР (Государственное агентство по охране окружающей среды и лесного хозяйства при Правительстве Кыргызской Республики).

Вопрос 11: Учтено ли в проекте сохранение плодородного слоя почвы?
Ответ 11: Да, данные мероприятия предусмотрены. Снятие почвенно-растительного слоя, транспортирование и укладка его в кавальеры для хранения в специально-отведенных местах с последующим использованием для восстановления нарушенных земель.

РЕШИЛИ:

Участники общественных слушаний поддержали проект «Реабилитация системы водоснабжения в селе Даркан», как жизненно важный для бесперебойного обеспечения чистой питьевой водой жителей айыл окмоту.
ПУОСС был одобрен жителями подпроекта.

Глава айыл окмоту Даркан **Джусупов Н.М**

Специалист по мерам безопасности: **Керимбекова М.**

Секретарь:

СПИСОК

участников общественных слушаний по обсуждению
Плана управления окружающей и социальной средой (ПУОСС)
при реабилитации системы водоснабжения в подпроекте Дархан

с.Дархан

26 июля 2018г.

№ п/п	Ф.И.О. участника	Организация/Должность	Подпись
1	Баймурзаков К.	СООППВ, председ.	
2	Тыныбаева Т.	бух. СООППВ, менеджер	
3	Экеева Б.	Жит. АЙК	
4	Жумабаева Т.	житель АЙК	
5	Карымшаков	пред. СКЗ	
6	[illegible] Т.	квартальный	
7	Умаров И.Э.	городская А/К	
8	Мамбетов Н.	АДК	
9.	Камалиева М.	ГСВ Дархан	
10	Керимова [illegible]	ГСВ Дархан	
11.	Асиев Т.	Дархан т.	
12	Темирбеков Ч.	жит. Дархан	
13	Жумабаева Д.	нач. АК Орго	
14	Кадыкалиева Б.	сдо АК Орго	
15	Жумадылова А.	д/хозяйка	
16	Султангазиев	фермер	
17	Берикбаев Н.	Фермер	
18	Темирбеков М.	Дархан	
19	Кемелдеев С.	Дархан	
20	Жайбылдаев А.	Дархан	
21	Баймуратов Н.	СООППВ руков.	
22	Рысалиев И.	[illegible]	
23	Суйунбаев З. К.	[illegible]	

СПИСОК

участников общественных слушаний по обсуждению
Плана управления окружающей и социальной средой (ПУОСС)
при реабилитации системы водоснабжения в подпроекте Дархан

с.Дархан   26 июля 2018г.

№ п/п	Ф.И.О. участника	Организация/Должность	Подпись
24	Мусаев Адилет	строитель	
25	Малиев Айдар	сп комендант	
26	Кайкообаев Эсенбек	фермеры	
4 27	Иманкулов Жаныбек		
28	Дуйшонбаев Улан		
6 29	Жакыпбаева-Премя	дом хозяйка	
7 30	Жанонакова Н.	д.х.	
8 31	Асанбекова Д.	д.х.	
8 32	Токонбекова Н.	мугалим	
33	Токтобек В	д.х.	
34	Иманов И И	Глава Дархан А/о	
35	Жумабекова М. Б.	спец. по вор. Бухг