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

Kun-Tuu subproject

February 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 Kun-Tuu 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

Kun-Tuu Subproject includes two villages, Kun-Tuu and Shalta, belonging to Kun-Tuu Ayil Okmotu, Sokuluk Rayon, Chui Oblast.

Kun-Tuu subproject villages are located at 15-20 km to south-west from the rayon center, Sokuluk village, and at 15 km from Bishkek. The nearest railway station is located at 19 km from the construction site.

№	Name of village	Population	Households	Cattle	Small cattle	Horses
1	Kun-Tuu	5420	1355	1800	3878	670
2	Shalta	3012	753	1200	3200	600
	Total (subproject)	8432	2108	3000	7078	1270

The following municipal institutions are located in the subproject area: Secondary school for 900 pupils (Kun-Tuu v.); hospital (Kun-Tuu v.); administrative building of ayil okmotu (Kun-Tuu v.); mosque (Kun-

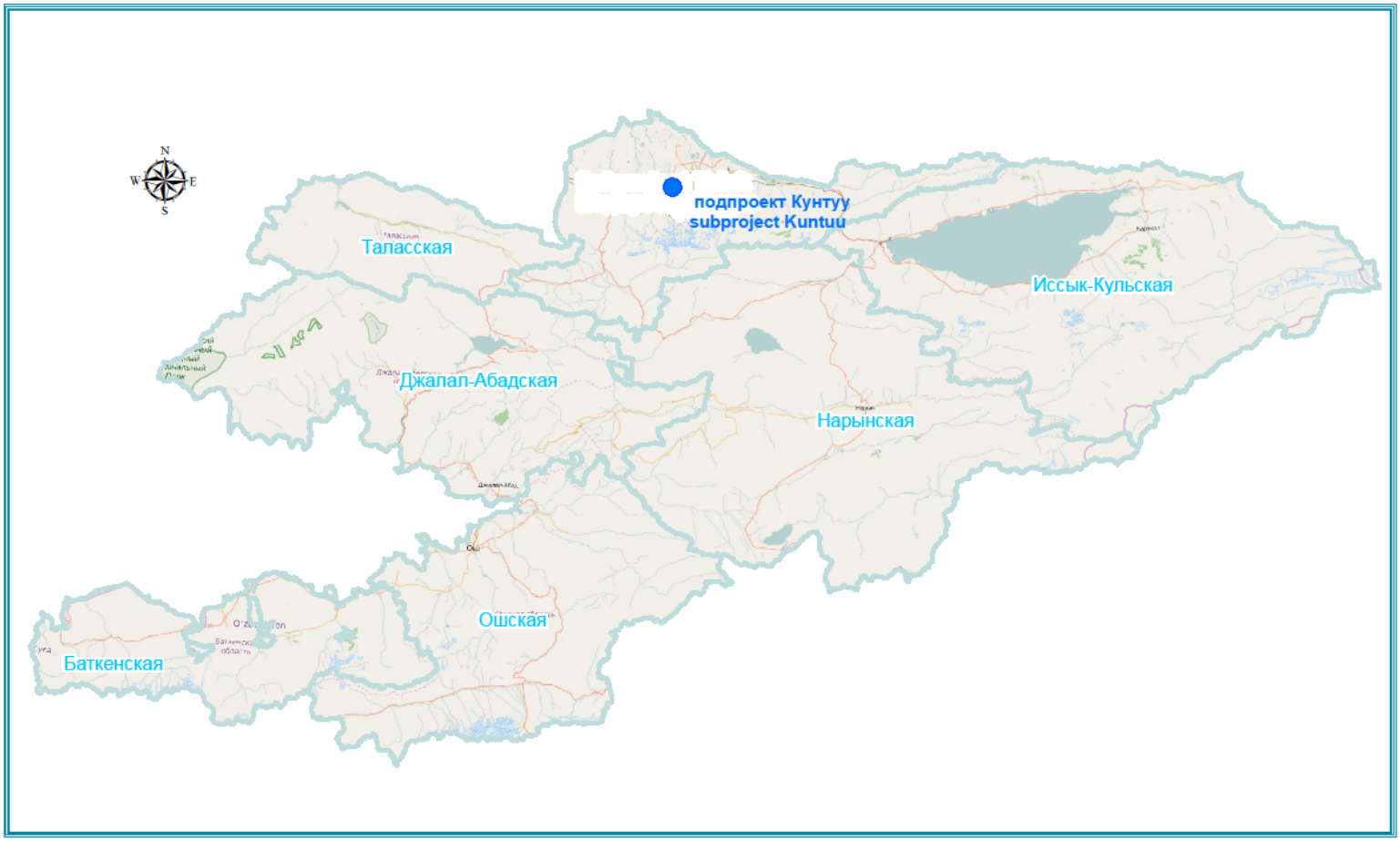
[1] In accordance with the proposal of ARIS and Department of Water Supply and Sanitation (DWSS) the project name was changed from RWSSP-3 (Third Rural water supply and sanitation project) on SRWSSDP (Sustainable Rural Water Supply and Sanitation Development Project)

Tuu v.); secondary school for 220 pupils (Shalta v.); kindergarten (Shalta v.), First Aid Point (FAP) (Shalta v.); mosque (Shalta v.).

All social institutions, except for FAP and Mosque, are connected to the water supply system but due to expiration of service life of pipeworks there is need to replace connections to the buildings.

Climate of a foothill part of the Chui Valley is continental. In winter time the territory is under the influence of a high pressure area that promotes establishment of cloudless frosty weather with sharply expressed inversions of temperatures. In the spring and at the beginning of summer, repeatability of the western and northwest invasions which are followed by rapid changes of temperature and rainfalls. The second half of summer is characterized by dry and hot weather.

Absolute maximum temperature, tºC	*+42ºC*
Design temperature of the coldest five-day period	*-23ºC*
Average temperature of the coldest period	*-10,6ºC*
Average relative air humidity at 15:00:	
of the coldest month of the year	*63%*
of the hottest month of the year	*31%*
Annual precipitation	*471 mm*
Maximum penetration depth of freezing level in the ground	*100 cm*
Seismicity of the area	*9 points*



Water supply system

Kun-Tuu Village

Water supply system in the village was built in the late 60s-70s. Source of water supply was underground water. In 1989, two boreholes, each 190m deep, were drilled at the water intake site. Boreholes are equipped with operational-filter columns. At present, one of the boreholes at the water intake site of Shalta village is being used to supply water to Kun-Tuu village. For this purpose, a transformer substation (TS) was installed near the borehole, which is working for Kun-Tuu village, and a new water main was constructed from the borehole to Kun-Tuu village along the western outskirts of the dacha (suburban) areas below the water intake site of Shalta village. In Kun-Tuu village, there are 2 new streets and 5 streets of new buildings that are not connected to the water supply system. Expansion of water supply network for the length of about 5,2 km is required. At present, the required amount of water for this village is 1006,52 m^3/day.

Shalta Village

At present, the required amount of water for this village is 617,7 m^3/day.

Water supply system in the village was built in the late 60s-70s. The source of water supply was spring water, and afterwards, underground water. In 1973-1981, three boreholes were drilled at the water intake site to supply water to Shalta and Kun-Tuu villages.

At present, two boreholes are in operation drilled in 1978 and 1981 with depth of well 150m and 180m;

One of the boreholes situated on the north side of the water intake site is presently used for the needs of Shalta village. It has its own transformer substation. The second borehole is used to supply water to Kun-Tuu village

Distribution network of Shalta village in general is in an unsatisfactory condition, it is constructed of 100mm and 200mm asbestos-cement pipes, and the total length of network is 7370m. The network has 33 manholes, but almost all of them are littered with rubbish, tap stands do not work because of incomplete parts, many manholes do not have covers. Most households are equipped with private connections[3].

[3] A private connection means unauthorized connection to the water supply network without observing the technical requirements

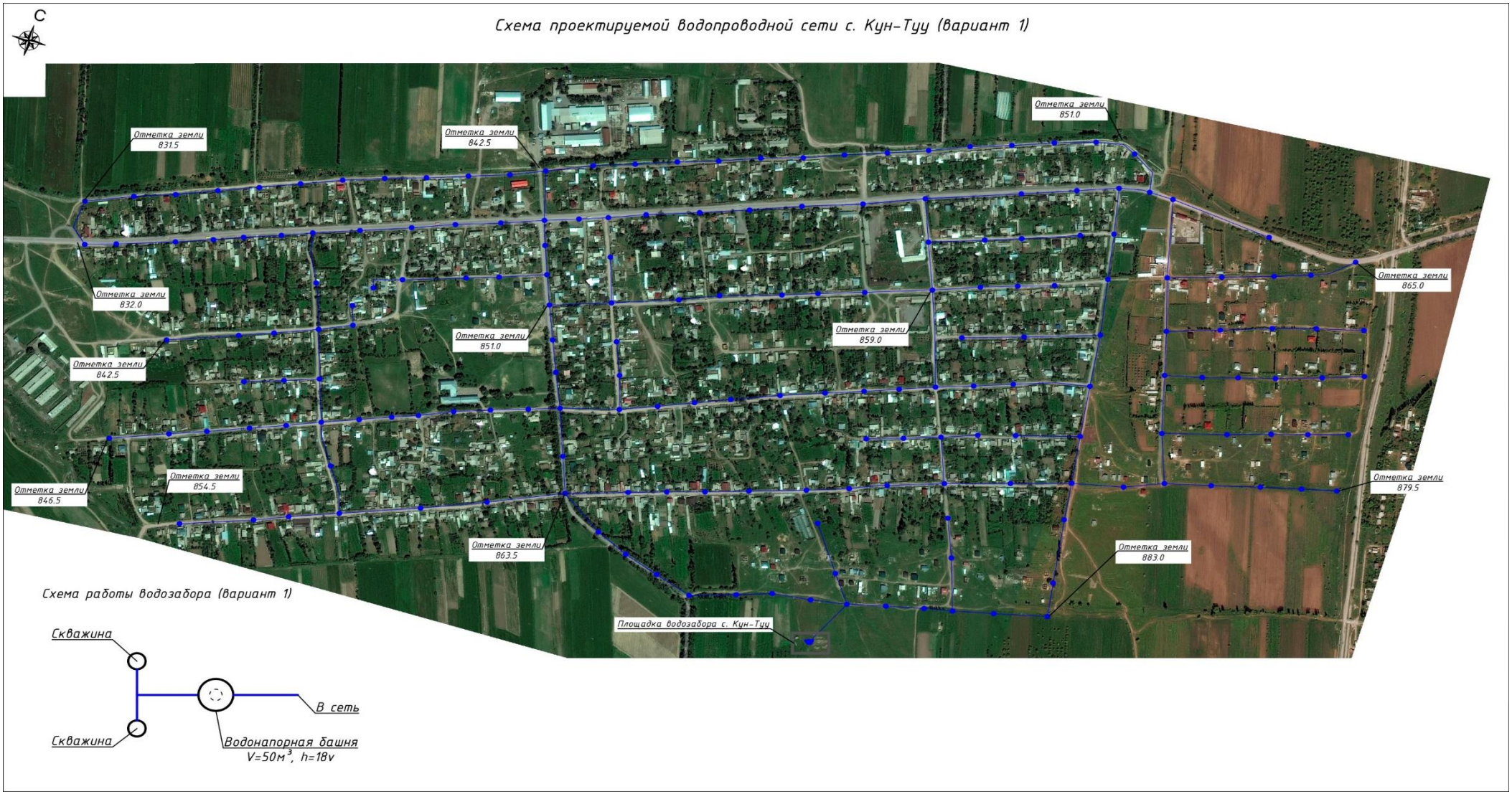

С
Схема проектируемой водопроводной сети с. Кун-Туу (вариант 1)
Отметка земли 831.5
Отметка земли 842.5
Отметка земли 851.0
Отметка земли 832.0
Отметка земли 865.0
Отметка земли 851.0
Отметка земли 859.0
Отметка земли 842.5
Отметка земли 854.5
Отметка земли 846.5
Отметка земли 879.5
Отметка земли 863.5
Отметка земли 883.0
Площадка водозабора с. Кун-Туу
Схема работы водозабора (вариант 1)
Скважина
Скважина
В сеть
Водонапорная башня
V=50м³, h=18v


Схема проектируемой водопроводной сети с. Шалта (вариант 1 и 2)
С
Отметка земли 910.0
Отметка земли 944.0
Отметка земли 942.0
Отметка земли 956.0
Отметка земли 883.5
Отметка земли 881.0
Отметка земли 894.0
Отметка земли 915.0
Отметка земли 954.0
Водовод от существующей площадки водозабора
Существующая площадка водозабора с. Шалта

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

Planned activities in Kun-Tuu village:

1. Rehabilitation of two existing boreholes through cleaning it by sand pumper, airlift washing, replacement of the existing submersible pump for a new energy efficient one (with efficiency not less than 77,8%, Q=114,2 l/s, H=176,1m and N= 80,9kW) (1 - working, 1 - standby).
2. Installation of check valves in the well heads, excluding water flow into the wells, as well as the impact of the hydraulic shock on the pump equipment because of turning off the pump.
3. Construction of chlorination building with installation of equipment for chlorination.
4. *Construction of two pressure-regulating tanks* with estimated capacity of 300 m^3 each.
5. Construction of second stage pumping station of underground type. The building has a fully equipped pumping unit consisting of 4 pumps (2 - working, 1 – fire-fighting, 1 – standby), capacity of pumps is 129,2 m^3/h, head – 18,7 m, power consumption – 10,0 kW, total efficiency – 65,5%.
6. Construction of new a water transmission line from water intake site to the distribution network of the village using PE 100 Ø 200 mm pipes; length is 2,084 m
7. Onsite pipework using PE 100 Ø 75,110 mm pipes; total length is 9,694 m

Planned activities in Shalta village:

1. Rehabilitation of two existing boreholes through cleaning it by sand pumper, airlift washing, replacement of the existing submersible pump for a new energy efficient one (with efficiency not less than 75%, Q=71 l/s, H=78m).
2. Disinfection system: UV treatment.
3. Construction of new a water transmission line from water intake site to the distribution network of the village using PE 100 Ø 200 mm pipes; length is 2,000 m
4. Onsite pipework using PE 100 Ø 75,110 mm pipes; total length is 10, 500 m

The estimated period of construction and rehabilitation works is 18 months. The defects liability period is 12 months.

Kun-Tuu 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 Kun-Tuu 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 aspects

Demographic data. The summative demographic data is as following: target population is 8432 people,. The total number of households is 2108. The main business activities are farming, agriculture. Women in the village are housewives mostly (approximately 75%).

Ethnic composition: 51% are Kyrgyz, 23% are Russians, and other nationalities are 26%. There was no any interethnic conflicts before, we can say that the possibility of interethnic conflicts and other social tensions is unlikely at this project site.

Potential conflict factors to be triggered are: perception of or actual delay in implementation; potential social resistance to tariff increase; changes in water consumption behavior and practice; limited capacities of local self-governments. These issues will be mitigated through a proper information sharing, availability of Beneficiary Feedback Mechanism (BFM) and greater engagement of women in project activities.

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.
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.

Section 4 describes social impact minimization measures.

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 beneficiaries 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.

All appeals and complaints from citizens received under the SRWSSDP deliveres 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 Kun-Tuu subproject are[4]:

- **The Constitution of the Kyrgyz Republic 2010**
- **The Law "On Environmental Protection"[5]**
- **Law on Environmental Expertise[6]**
- **The Law of KR "On General Technical Regulations on Ensuring Ecological Safety in the Kyrgyz Republic"[7]**
- **The Law of KR "On Water"[8]**
- **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.

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

[5] 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).

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

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

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

4. ENVIRONMENTAL AND SOCIAL MANAGEMENT/MITIGATION PLAN

Environmental and Social Elements	Impacts and risks	Proposed mitigation measures[9]	Institutional responsibility for mitigation (Cost of mitigation activities)[10]	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 Daily checks of machinery of leaking of oil; ban to wash machinery at construction site.	Criteria / specifications to be incorporated into bidding and contract documents.	Field technical supervision engineer of ARIS is responsible to monitor and supervise the activities, including monitoring of potential environmental risks.

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

[10] 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;	Topsoil removal for further use during restoration works Landscaping in accordance with the project.	It is not considered as a separate cost item	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;	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***.		
Water resources	Borehole rehabilitation works	During the construction period, there will no impacts on surface water sources. Refuse from excavations beside groundwater occurrence. Working areas with machinery, cement mixers, and fuel tanks are located beyond water protection zones. During the operational phase, there will be no impact on surface waters. Water for drinking water supply will be taken from the existing network.	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.	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

		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.		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	Negligible costs Contractor costs	Will be further defined with specifications in the design documents Field technical supervision engineer of ARIS is responsible

		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.		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	Contract organizations	ACSD Field technical supervision engineer of ARIS is responsible to monitor and supervise the activities, including monitoring of potential environmental risks.

		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.		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)		
Human communities	Demolition of buildings, resettlement in connection with land withdrawal for construction	Use of procedures outlined in World Bank's OP 4.12 Involuntary Resettlement		
	Suspension of utility services	Timely notification of communities about planned cutoffs; rapid restoration of utility services		
	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.		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.		ARIS
	Potential social resistance to tariff increase	Social mobilization, awareness raising (welfare activities, community consultations, development and implementation of outreach campaigns). Tariffs will be developed with due regard to the views of communities gathered during public consultations.		ARIS
	Limited capacities of local authorities	The project allows for a range of capacity building activities and technical assistance to local authorities.		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**[11] 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			

[11] 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

ESMP public consultations were held on February 6, 2018 in Kun-Tuu 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 30 people, 15 of them women, that is, 50%.

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 during the rehabilitation of water supply system in Kun-Tuu sub-project of Sustainable Rural Water Supply and Sanitation Development Project (SRWSSDP)

Date and venue: Kun-Tuu v.
February 6, 2018 at 10:00 am

Kerimbekova M.– Safeguards Specialist in her opening statements greeted the participants and introduced ARIS specialists that participated in the project preparation.
Further she made a presentation on social and environmental safety measures provided for the project. She provided detailed information on environmental safety and social protection measures. Environmental and Social Management Plan was presented. The presentation covered the main points of the developed document, objectives, tasks and implementation mechanisms.

The population was provided with full information on Beneficiaries Feedback Mechanism (BFM). This mechanism is a process of receiving prompt, objective information, evaluation and review of appeals (applications, proposals, complaints, positive feedback) related to ARIS projects.

The participants of consultations further discussed contents of the sub-project, expresses their opinion. The following questions were asked:

Question 1: Are civil works going to start this year?
Answer 1: Yes, soon a tender process for selection of contracting company for construction is going to start. According to the plans construction and assembly works will start in early June this year.

Question 2: As you know during civil works a special machinery will work in our streets. Also during pipe laying the asphalt coat and irrigation channels will be obviously destructed. Is it going to be restored?
Answer 2: Expenses for the restoration of asphalt coat in each sub-project is included into Bill of quantities including. As we know in your sub-project only one road is paved and this road will not be affected.

Question 3: Does the design include gravelling during the restoration of earth road?
Answer 3: No, gravelling is not provided, the road will be restored to the original condition.

Question 4: Will this project provide sewerage system?
Answer 4: No, SRWSSDP ("Ala-Too bukagy" program) provides only construction of water supply system.

Question 5: How the civil works are going to be performed? Will all tranches be excavated at the same time? Is the whole village going to be excavated?
Answer 5: No, the civil works will be performed according to the schedule, the works will be performed in stages i.e. the pipes will be first laid on one street, further the works will be conducted on the other street. To reduce the impact on local people and close the roads at one time and disturb traffic an optimal schedule of civil works will be prepared and construction will be performed according to this schedule.

Question 6: Will the additional boreholes be drilled?
Answer 6: No, the design provides rehabilitation of 2 boreholes in Kun-Tuu village and rehabilitation of 2 boreholes in Shalta village.

Question 7: What is the width of a tranche?
Answer 7: maximum width is 2 meters.

Question 8: Will the works be performed at night?
Answer 8: The works will be performed only at daytime and on working days. Machinery will work only from 8:00 to 18:00. ESMP provides all mitigation measures including noise nuisance. This document will be a part of tender documents.

Question 9: Will the machinery affect our telephone wires?
Answer 9: The design took into consideration all factors, including telephone wires. It is hardly probable that the machinery will break the wires. In such case the contractor will restore them.

Question 10: Life cycle of the pipes?
Ответ 10: 20 years.

Question 11: What materials will the pipes be made from? Will all pipes be replaced?
Answer 11: Pipes will be polyethylene. Yes, all obsolete pipes will be replaced.

Question 12: What is the budget of the project?
Answer 12: Budget for civil works will be known after signing a contract with a contracting company.

Question 13: Who will conduct environmental monitoring?
Answer 13: Technical supervision engineer will be always on site and conduct general supervision of construction site including monitoring of environmental and social risks. ARIS safeguard specialist and infrastructure engineer will be responsible for general supervision i.e. me and AO technical supervision will control the whole process of environmental monitoring.

Question 14: Does it mean that we can apply with any questions, comments, complaints to BFM?
Answe 14: Yes. Any questions related to the project can be sent to BFM. All complaints and suggestions can be sent through mentioned communication channels.

Tagaraeva Z. – executive secretary of AO:

We have been waiting this project for decades. Currently our system is poor. We consume dirty water taken from the obsolete asbestos pipes. From Sokuluk raion only Kun-Tuu and Kyzyl-Tuu sub-projects were included into the project. We are happy that our village is covered by the project. As for the roads after completion of water supply system construction we are going to allocate the cost of new asphalt coated roads into annual budget.
We understand that the civil works inconvenience and we are ready for this. Also we are happy that the project provides mitigation measures for the population.

THE DECISION TAKEN:

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

ESMP was approved by the residents the subproject area.

The head of Kun-Tuu aiyl okmotu **Korgoldoev T.**

Safeguards Specialist: **Meerim Kerimbekova**

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

Место и время проведения: с. Кун-Туу
6 февраля 2018 г. в 10:00 часов

Керимбекова М.– специалист по мерам безопасности, открыла слушания, поприветствовав приглашенных и представила сотрудников АРИС, участвовавших в подготовке проекта.
Далее 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. В презентации подробно были освещены основные моменты разработанного документа, цели, задачи, механизмы реализации.

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.
Далее, участники консультаций активно обсуждали содержание подпроекта открыто высказывали свои мнения. Были заданы следующие вопросы

Вопрос 1: Начнутся ли строительные работы в этом году?
Ответ 1: Да, в скором времени начнется тендерный процесс по отбору подрядной организации на строительство. Согласно планам, строительно-монтажные работы начнутся в начале июне текущего года.

Вопрос 2: Как вы знаете в период строительных работ в наши села придет тяжелая техника и будет ездить по нашим улицам. Также при прокладке труб скорее всего разрушат асфальтовое покрытие, поливные арыки. Будет ли это все восстановлено?
Ответ 2: Затраты на восстановление асфальтового покрытия в каждом подпроекте заложено в Ведомостях объемов работ, участки дороги будут восстановлены. Как мы знаем в вашем подпроекте только одна дорога заасфальтирована, однако по проекту она не будет затронута.

Вопрос 3: При восстановлении грунтовых дорог, заложено ли в проект запыпка гравием.
Ответ 3: Нет, засыпки гравием не будет, дорога будет восстановлена до первоначального состояния.

Вопрос 4: Будет ли в рамках данного проекта предусмотрена канализационная система
Ответ 4: Нет, данный проект ПУРСВС в рамках программы «Ала-Тоо Булагы» предусматривает только строительство системы водоснабжения.

Вопрос 5: Как будет вестись стройка, одновременно будут вырыты все траншеи, все село будет вскопано?
Ответ 5: Нет, строительные работы будут вестись согласно графику, работы будут проводиться поэтапно, то есть трубы будут проложены сначала на одной улице, а потом только будет начата работа на другой. Для снижения воздействия на местные населения, чтобы не перекрывать дороги одновременно, не мешать трафику, будет подготовлен оптимальный график работ и стройка будет реализовываться согласно ему.

Вопрос 6: Скважины дополнительные будут буриться?
Ответ 6: Нет, по проекту предусмотрена реабилитация 2 скважин в селе Кун-Туу и реабилитация 2 скважин в селе Шалта.

Вопрос 7: Какова будет ширина траншеи?
Ответ 7: Максимальная ширина 2 метра.

Вопрос 8: Будут ли проводиться работы в ночное время?
Ответ 8: Работы будут проводиться только в дневное время и по рабочим дням. Техника будет работать только с 8 до 18 часов, в ночное время работы не будут вестись В ПУОССе прописаны все меры по снижению негативного воздействия, в том числе и шумовое воздействие, этот документ будет частью тендерных документов.

Вопрос 9: Заденет ли тяжелая техника наши телефонные провода?
Ответ 9: При проектировании учитывались все факторы, в том числе и телефонные провода, тот факт, что телефонные провода будут сорваны тяжелой техникой маловероятна. В случае происшествия подрядная организация восстановит их.

Вопрос 10: Каков срок службы труб?
Ответ 10: 20 лет.

Вопрос 11: Из какого материала будут трубы? Все ли трубы будут заменены?
Ответ 11: Трубы будут полиэтиленовые. Да, все старые трубы будут заменены на новые.

Вопрос 12: Каков бюджет проекта?
Ответ 12: Бюджет на СМР будет известен после подписания контракта с подрядной компанией.

Вопрос 13: Кто будет проводить экологический мониторинг?
Ответ 13: Инженер по техническому надзору будет постоянно находится на месте и осуществлять общий надзор за строительной площадкой, включая мониторинг потенциальных экологических и социальных рисков. Специалист по мерам безопасности и инженер по инфраструктуре АРИС несут ответственность за всеобщий надзор, то есть мы совместно с техническим надзором от АО будем контролировать весь процесс.

Вопрос 14: Значит, с любыми вопросами, предложениями, комментариями, жалобами мы можем обращаться в МОС?
Ответ 14: Да, любые вопросы относительно проекта вы можете направлять через МОС. Все жалобы, пожелания можно направить через озвученные каналы связи.

Тагараева Ж.-ответственный секретарь АО:

Мы очень долго ждали данный проект, десятки лет. На данный момент состояние нашей системы плохое, пьем грязную воду из старых асбестовых труб. Из Сокулукского района вошли в проект по водоснабжению только подпроекты Кун-Туу и Кызыл-Туу. Мы очень рады, что наши села охвачены проектом. Что касается дорог, после завершения строительства системы водоснабжения, мы будем закладывать в ежегодный бюджет АО затраты на строительство новых асфальтированных дорог.
Мы понимаем, что во время любой стройки бывают неудобства, мы готовы к этому, также мы рады что в проекте предусмотрены мероприятия по снижению воздействия на население.

РЕШИЛИ:

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

Глава айыл окмоту Кун-Туу **Корголдоев Т.И.**

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

Секретарь:

List of participants.

СПИСОК

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

6 февраля 2018г.

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6	Богданова Б.А	64-3-09	
7.	Шырдакова Ж.С.Н.	жительница	
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СПИСОК

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

6 февраля 2018г.

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27	Котекова Г	жительница	[signature]
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29	Кермшбекова М	спец. по связям с бед-ти	[signature]
30	Аскарбеков С.И.	инженер АРИС	[signature]


ШАЙЛООЧУНУ ИДЕНТИФИКАЦИЯЛОО ПРОЦЕССИ
ПРОЦЕСС ИДЕНТИФИКАЦИИ ИЗБИРАТЕЛЯ