KYRGYZ REPUBLIC

MINISTRY OF AGRICULTURE, FOOD PROCESSING AND LAND IMPROVEMENT OF THE KYRGYZ REPUBLIC

DEPARTMENT OF WATER RESOURCES AND LAND IMPROVEMENT

AGRICULTURAL PRODUCTIVITY AND NUTRITION IMPROVEMENT PROJECT

ENVIRONMENTAL MANAGEMENT PLAN

for subproject WUA "Bash-Keltebek", At-Bashy rayon, Naryn oblast

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CONTENT

Acronyms

WUA	Waterusers association
NSR	Night storage reservoir
SAEPF	State Agency for Environmental Protection and Forestry
GPAFS	Global Program for Agricultural and Food Security
POL	Petroleum, oil, lubricants
SETI	State Environmental and Technical Inspectorate
DWRLI	Department of Water Resources and Land Improvement
OIP-2 AF	Additional Financing for OIP-2
CDN	Collector&drainage network
ER	Efficiency ratio
KR	the Kyrgyz Republic
IDA	International Development Association
AHS	Ameliorative Hydrogeological Survey
LSGA	Local self-governing authorities
EA	Environmental Assessment
E	Environment
PIU	Project Implementation Unit
OIP-2	Second On-farm Irrigation Project
ISF	Irrigation Service Fee
TS	Topsoil
AISP	Agricultural investments and services Project
APNIP	Agricultural Productivity and Nutrition Improvement Project
RSU	Rayon Support Unit
RVK	Rayon Irrigation Department (Rayvodkhoz)
SanPin	Sanitary Regulations and Rules
WBSMQRS	World Bank safety measures quality rating system
AAS	Agricultural Advisory Services
GWT	Ground Water table
O&M	Operation&Management
HP	Hydropost
HTS	Hydro-technical structures
SVL	Soil-vegetation layer
FRP	Forced resettlement plan

1. Introduction

The Agricultural Productivity and Nutrition Improvement Project (APNIP) for the Kyrgyz Republic is being implemented with the support of the International Development Association (IDA) and financed by the Trust Fund, provided by the Global Agricultural and Food Security Program. The general Environmental Management Plan (EMP) was prepared under APNIP. The EMP is addressed to ensure compliance of the Project with the environmental management principles and practice and, therefore, with the requirements of environmental protection policy and laws of the Government of the Kyrgyz Republic, as well as the IDA environmental safeguards. The objectives of environmental assessment (EA) is to identify the significant impact(s) of the proposed Project on the environment (positive and negative), identify appropriate preventive and mitigation interventions aimed at preventing, minimizing or eliminating any expected irreversible impact(s). The EMP serves as a management tool that ensures proper implementation of interventions to prevent and mitigate the environmental impact(s), as well as monitoring and institutional acknowledgement of recommended activities during the implementation of the proposed Project. The EMP also establishes the necessary institutional obligations, proposes the implementation timing of such activities and cost estimates for their implementation within the budget proposed by the Project. APNIP in the World Bank safety measures quality rating system (WBSMQRS) is classified as "B". No irreversible or significant impact(s) on the surrounding environment is expected. Based on the general EMP, the Environmental Management Plan (EMP) for the WUA "Bash-Keltebek", At-Bashy rayon, Naryn oblast rehabilitation has been developed, considering the specifics of this particular subproject.

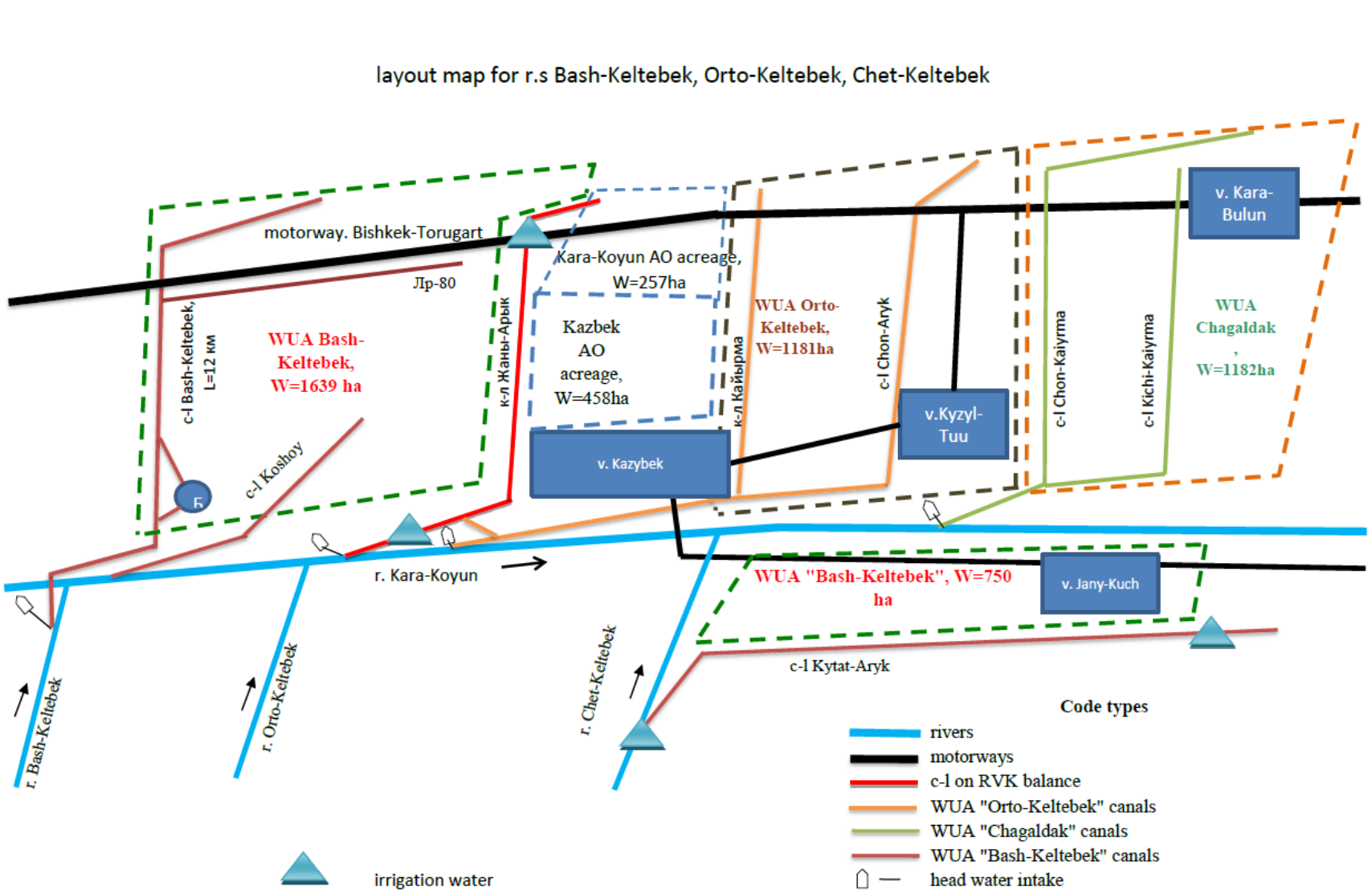

Image 1. Layout map of WUA "Bash-Keltebek, Orto-Keltebek and Chet-Keltebek" irrigation networks.

2. Description of the subproject under rehab

The location of WUA «Bash-Keltebek» is on the territory of Kazybek AO, village Kazybek, At-Bashy rayon, Naryn oblast, 50 km off v. At-Bashy rayon's center, 95 km off city Naryn and 460 km away of Bishkek. The service area 2 389 ha. The area`s altitude is 2100-2800 masl. The population 3720 people, 840 households. December 3, 2002 is the date of WUA "Bash-Keltebek" establishment. The irrigation system is fed from the rr. Bash-Keltebek and Chet-Keltebek. The total acreage of the system with irrigation network is 2389 ha, including from the r.s Bash-Keltebek - 1639 ha and from r.s Chet-Keltebek - 750 ha. In total, WUA has on-farm canals with the total length of 39.1 km, of which - 7.5 km lined and 31.6 km –earthbed.

The complex of main water intake facilities on the r. Bash-Keltebek is in the upper part of river system (r.s), and in a satisfactory condition. Water supply is carried out through the bulk water supply canals "Bash-Keltebek and Koshoy". The initial part of canal Bash-Keltebek is 2.7 km long, lined with L-shape blocks. Canal`s bed ruined, in various places L-blocks subsided in to te soil and broke apart, canal does not pass the required water flow. Further, down, 4.53 km, the canal is lined with prefabricated reinforced concrete slabs, and about 4 km length of prefabs disintegrated and require replacement. The joint lines between the slabs are also destroyed, resulting in canal`s bed wash-off, leading to disintegration. As the lining deteriorates, water losses to filtration increasing. The remaining part of canal, 5.2 km, passes in an earthbed. The canal`s earthbed is in satisfactory condition. The water metering post and water outlets with cross regulators and other HTS destroyed, practically nonfunctional and require major repair.

2.1 Salient features of the rehab subproject

The irrigation water in canal "Kytat-Aryk" is fed from the r. "Chet-Keltebek" through a temporary built water spur that periodically washed-off. The head cross regulator on canal" Kytat-Aryk" is absent, resulting in delays to quickly regulate water supply into the canal and ensure discharge of excess water from the supply canal into the river. There are no HTSs to control sediments at the water intake points. At present, water intake into the canal is carried out through temporary water-catching spurs (Gibb`s groin) and built from the soil. During the flood, while abstracting water into the canal, the spurs and dams are also washed-off, and the spurs have to be reworked several times a year. With this type of water intake, it is not possible to execute normal irrigation water supply, to regulate water flow and to desilt water. For secondary desilting and to prevent the entry of sediments during water intake, it is necessary to build water settling basin with a hydraulic wash-off below the outlet canal.

In the upper part, for about 1.3 km, canal "Kytat-Aryk' flows alongside of a slope and is closer to the right bank of r. "Chet-Keltebek". There is a problem of irrigation water shortage due to insufficient capacity of canal, which is in extremely unsatisfactory condition. Multiple sections of canal do not meet the throughput requirements and reduced because of filtration losses. In case of torrential rains, erosion of the soil occurs at those areas, which, then, washed-off into the canal, leading to the canal`s left dam slope collapse. There is also the need for annual canal`s mechanical cleaning from sediments and rebuild canal`s section(s). At those sections of the canal, water filtration losses are sufficient. Destroyed sections of the canal have to be reworked several times a year and lining is urgently required. The system does require construction of HP. Water metering is not carried. ISF paid per hectare irrigation, but for delivered water volumes. The rehab subproject provides construction of a HP. After completion of which the WUA ensures water, metering and IFS will be carried forward on a volumetric basis, which is in current conditions simply not feasible.

2.2. On-farm canal «Bash-Keltebek»

The length of canal is 12.43 km, throughput - 1.5 m³, length of lined part - 7.23 km, and earthbed length - 5.2 km. The command irrigation area is 1639 ha. The headwater intake requires partial repair. The bed of the lower part of downstream is destroyed, the flushing gate dented and bent, the offtake canal`s gate gearbox is nonfunctional, rubber sealants are absent. In the head of the canal there is an aqueduct, through the r. Kara-Coin. The bed is destroyed, water flows through empty spaces. Concrete bed and walls have cracks, fractures, porous structure: attrition of which is 65 - 100%. Of the upright support frames of the aqueduct, one frame disintegrated, as well as 24 meters of the aqueduct.

About 4.0 km of the entire length of the canal`s lining is destroyed and require replacement. The joint seams between canal`s slabs destroyed, tightness of the joint seams absent, resulting in erosion of the base and deformation of slabs. As the lining deteriorates, water losses to filtration increase. For the cost saving purposes it is necessary to dismantle the slabs alongside of 2.0 km and line that section with butobetone (masonry). Dismantled slabs from the section, suitable for follow-up use, could be reused for another parts of canal. The watering meter post and water outlets with cross-structures and other HTS are destroyed, practically nonfunctional and require repair. NSR reservoir, with available water storage 62 th.m³ is also adjoined to canal “Bash-Keltebek”. The water-surface area is 1.12 ha, length of the dam is 108 meters. The NSR`s water outlet is in non-operating condition, rehabilitation of the outlet is necessary.

2.3. On-farm canal «Kytat-Aryk»

The length of the "Kytat-Aryk" canal is 12.0 km, throughput is 1.5 m³, command irrigation area 750 ha. The canal is in earthbed and receives water from the r. Chet-Keltebek. At the canal there is no head gate-regulator that results in delayed water supply into canal and ensure the excess water discharge from the supply canals into the river. It is necessary to build a river-canal intake head-regulator. To prevent silting of the canal, a stilling basin with a hydraulic flushing is necessary to be built behind the discharge canal. The stilling basin will accumulate sediment particles larger than 0.25 mm, with a volume of 1.42 th.m³ per year. With available water storage volume of the stilling basin 138 m³, 10 wash-offs are required to be executed during the vegetation period. In the upper part, for about 1.3 km, canal “Kytat-Aryk” passes near the right bank of the r. Chai-Keltebek. The slope of the left canal`s dam is disintegrating. Annually, it is necessary to clean the canal from sediments and restore canal`s cross-section. Water filtration losses are observed at this section of canal. Therefore, the Project includes the canal`s route change, at the length of 1.0 km, further down from the right bank of the r. Chet-Keltebek and line that section of canal with butobeton up to the stilling basin and remaining part of canal 1.0 km line with reinforced concrete blocks L-shape (Г-100).

3. Description of activities executed under the Project

The Project includes the following types of activities:

- Rehab of 2 on-farm canals with the total length of 7.4 km;
- Construction of: 1 water intake structure, 1 stilling basin with hydraulic wash-off, 2 HPs;
- Rehab of canal`s lining, 1 head water intake structure, 1 aqueduct, 5 cross-regulators and 1 water outlet into NSR.

3.1. Canal «Bash-Keltebek»

Under the Project, the following activities to be conducted on canal “Bash-Keltebek”:
- Dismantling of the aqueduct and canal`s bed, installation of new L-shaped blocks to replace broken, and select used old L-shaped blocks suitable for further use;
- major repair required to facing slabs at the canal`s section with length of 4.0 km;
- Repair of a water meter post and water outlets with cross-regulators and other hydraulic structures.
- Rehab of water outlet from canal "Bash-Keltebek" into the NSR.

3.2. Canal «Kytat-Aryk»

Under the Project, the following activities to be conducted on the canal:
- To prevent sediments entering canal, behind the discharge canal a stilling basin with hydraulic wash-off is to be constructed;
- The HP is to be built on the diversion canal;
- Changing the canal`s route alongside of 1.0 km, i.e., the Project includes the canal`s route change, at the length of 1.0 km, further down from the right bank of the r. Chet-Keltebek and line that section of canal with butobeton up to the stilling basin and remaining part of canal 1.0 km line with reinforced concrete blocks L-shape (Г-100).

Rehab of reservoirs, dams and dykes is not planned. Therefore, the policy on irrigation dams and reservoirs (Dam safety - OP 4.37) is not applicable. Construction and rehab works deadline: October 2018-2020.

4. Description of environmental parameters at the site

4.1. Climate

The climatic conditions of the region are given according to the long-term observations data at the Naryn meteorological station (m.s). The region`s climate is moderately continental. The average annual air temperature is + 25,0°C. The coldest month is January, with the absolute minimum of -38°C, the hottest - July with maximum of + 38°C. The average annual number of freezing and thawing cycles - 68, the average monthly temperature of the coldest month -25.0°C. The average annual precipitation - 249 mm. The annual moisture deficit - 746 mm.

The region`s climate is characterized by a moderately warm summer and cold winter (January - 17.3°C) with the average annual temperature - 2.5°C. The average duration of frost-free period - 146 days. The last frosts observed in early May, the first - in early September. Over the year, the average of 126 days with snow cover is observed in the region. The appearance of which is noted in the first days of November, and snow cover melting begins at the beginning of April`s second decade. Steady snow cover is noted from the end of November to the end of March. Winter always is noted with a stable snow cover. The average annual number of temperature transitions through 0°C - 68. The maximum depth of zero-degree isotherm penetration into the soil under natural snow cover - 254 cm, normative depth of seasonal freezing of soils under open surface exposed to snow from the horizontal platform is; for coarse clastic soils - 153 cm, for loams - 104 cm; the maximum height of snow cover - 60 cm.

4.2. Landscape

All the arable lands are located near-by the residential area of the flatland with the inclination 0.016. Geomorphologically, the (re)construction areas are confined to accumulative surfaces of different genetic types. The alluvial surfaces formed by the accumulative activity of large permanent factors and represented by beds, flood plains and regional terraces. The proluvial surfaces represented by narrow modern beds and bottoms of dry sais and small talus train. The soil cover is represented mainly by valley, light chestnut, mountain-valley, light-brown soils. In the Kyrgyz Republic, the entire area of agricultural lands are potentially erosion threatening. One of the extremely negative factors, contributing to water erosion, is the presence of terrain slopes. Therefore, in order to prevent erosive processes caused by irrigation of agricultural lands, it is necessary to use agro-ameliorative interventions aimed at preventing water erosion of soils. In the EMP, these activities are proposed for the period of operation of the facility. Construction works will not affect the erosion processes on the projected facility lands. Seismicity of the area is 9 points.

4.3. Hydrology

The main irrigation source for WUA is the r. Kara-Coin River, which is formed from the confluence of the rr. Shyrykty, Tashrabat, Bash-Keltebek, Orto-Keltebek and Chet-Keltebek Rivers, the river originates from the northern slope glaciers of At-Bashi Range at the absolute mark of 4500 m. The total river`s length is 45 km with average height of 3340 m and area of 1210 km². Type of river supply is the snow-ice with ground feed. The flood maximum is in July-August and reaches more than 35 m³/s. The rise of flood is characterized by its rapid increase, due to intensity of melting snow and ice in the mountains, and precipitation in the form of rain in summer. The average long-term water flow in the low-water period is 1.2 - 4.5 m³/s. The river flow velocity and depths from low-water season to high-water vary between 1.2-3.5 m/s and 0.2-1.2 m/s. At the sections where water intake structures located, the river`s slope is 0.016 and runs in the floodplain 50-100 m wide in boulder-pebble deposits, the average diameter of which is 126 mm, and the maximum diameter is 421 mm. The duration of freezing on the river is 90 days.

Average multiannual water flow the r. Kara-Coin

average water flow m^3/s												Q_{ave}, m^3/s
I	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X**	**XI**	**XII**	**год.**
0,30	0,31	0,38	0,47	2,28	2,07	1,35	1,18	0,46	0,38	0,35	0,33	0,82

4.4. Vegetation cover

Vegetation cover: tree and shrubbery vegetation, herbaceous plants. The SVL will not be disturbed, because (re)construction work will be executed on existing facilities. The works will not affect agricultural irrigation fields, because all rehabilitation facilities are beyond their borders. Part of Bash-Keltebek canal in the immediate vicinity of the r. Kara-Coin right bank. Alongside of canal there is a large number of tree and shrubbery vegetation, mostly sea buckthorn. During the canal`s rehab process the permission for tree surgery will be needed. According to the requirements of the Water Code of the Kyrgyz Republic, Art. 80 p.3., while carrying out repair and rehab works, cutting of shrub vegetation and trees that are within the alienation zones of water management structures and canals, as well as sanitary cutting and deadwood cutting, do not require permission from specially authorized state bodies. At the same time, prior to commencement of work, the Contractor will inform the environmental protection agency on forthcoming works concerning cutting of tree and shrubbery vegetation. If (re)construction works are carried out in areas not related to the alienation zones of water facilities, deforestation of tree and shrubbery

vegetation should be carried out in accordance with permit issued by a specially authorized environmental protection body.

5. Description of procedures related to regular operation workloads

5.1. Technical surveillance on canals and HTS condition

In the operational scheme activities, the paramount importance is paid to the timely conduct of preventive and rehab workloads that exclude probability of a system failure, while complying to the rules of its operation. The main indicators of a normal technical condition and a reliable operation of the on-farm irrigation network are provision of designed canal's throughput, minimum filtration and performance specification water losses, absence of sedimentation, greenery overgrowing, collapse and canal's erosion. If the actual canal's capacity corresponds to the estimated throughput, then the technical condition of a canal is good and considered as reliable. If there are 20 -25% throughput deviations, then a canal's reliability is reduced, and the technical condition is average. If the deviations are more than 25%, then a canal's performance considered as unreliable and its technical condition is below the average. To ensure a canal's throughput, it is necessary to conduct a careful monitoring over water regulating structures. The water volumes regulating structures must be easily and reliably (re)adjusted and controlled. While operating water regulating structures, it is necessary to ensure that there is no water leakage through the water outlet/inlet gates and no canals' erosion and destruction observed on its structural parts. Expansion and (re)construction of a canal's lined sections and joint sections are the subject of constant surveillance. The damaged lining must be reworked immediately. A canal's lined and unlined sections and HTS daily maintenance (cleaning, desilting) must be executed on a permanent daily basis to prevent cracking, to ensure proper performance and removal of floating debris that hinder a canal's performance. A particular attention must be paid to subsiding soils, as concrete lining on those soils is prone to cracks formations, leading to irreparable damages, if lining failure appears it should be reworked without any delay.

The joint sections of a canal, with prefabricated reinforced concrete slabs, are the subject of particular attention. Constant surveillance of which is necessary and, if there any urgency, must be treated with resilient watertight materials that can withstand a vegetation impact. Within the concrete flumes it is prohibited to dissolve various types of fertilizers that may cause destruction of concrete. It is also not recommended to operate concrete flumed network if water flow temperature is below -5 - 10°C. Therefore, in the process of preparing the network for the winter, the whole canal's route must be completely absent of water. The livestock crossing and pasturing on canal's dams and slopes is strictly prohibited. The livestock drinking and dipping allowed on a special canal's sections only. To monitor the quality of irrigation water and prevent a canal's sedimentation, the water samples must be regularly inspected for the following indicators: turbidity, temperature, hydrogen index and mineralization.

5.2. Preparing on-farm network for the winter period

In the winter period, the on-farm irrigation network can be used for water charging irrigation, washing off and other types winter watering, as well as for supplying water to the residential areas and livestock farms, filling up reservoirs. The control over canals and structures operation, in the winter, should be paid a particular attention, as to prevent formation of ice jams near bridges, crossings, etc. The trash racks that were set for the summer in front of water structures, must be removed for the winter. When frosts are formed and HTS are covered with the ice, in this case the ice must be chipped without disturbing integrity of the structures and canal's lining/coating.

5.3. Looking after wood lines and access roads

Forest plantations alongside of a canal are designed to protect a canal from vegetation overgrowing, lowering the level of groundwater alongside a canal's route and reducing the adverse effect of wind force on agricrops. Alongside of permanently embedded canals within the farm network that require constant desilting interventions, it is recommended to create, on the one side two-row or three-row strips of fast-growing trees and shrubbery. The distances between trees in the strip is 1-3 m, between bushes - 0.75 - 1 m with the distance between greenery strips of 1.5 - 3 m. The field and on-farm roads on irrigated area, as a rule, are ground roads. If they pass through silty loams and solonchaks, then a road is made of gravel or other coating. A road maintenance is reduced to keeping the upper layer in good condition. The thickness of gravel coated roads is maintained within 8 - 10 cm. The roadbed condition is also the subject of maintenance and must be periodically planned and compacted. Roadside cuvettes and canals must be cleaned off dirt and vegetation. To improve the water flow into cuvettes, the roadways must be made with slopes and with a slight lateral inclination from the middle to the cuvettes.

5.4. Repair workloads

The irrigation schemes are subject to repair workloads according to the annually developed and approved plans. In the irrigation and drainage systems operation practice, the current, major and emergency repair workloads are executed.

The current repair works executed annually including desilting of canals, removal of vegetation, strengthening and widening dams, cleaning berms, eliminating small landslides, collapses, rifts and sandspits, repairing damaged anchorages and canals' lining, repairing small damages of a structural parts. While carrying out current repair works, a complex technical upgrading and modifying a structural construction is not included. The preventive (prophylactic) repair workloads include:

- Patching ratholes;
- Structural cracks maintenance after ice impact;
- Tightening fixing bolts;
- Drainage structures winterization etc.

The preventive repair and a significant part of the current repair, including desilting of canals, vegetation and landslides removal, a minor canal repair(s), repair of structures, buildings and other devices are performed annually without stopping the scheme's operation.

The major repair is executed, as required, within a few years' period and includes: repair workloads on a canal's sections, dams and parts of a structure attrition and destruction, structural modification or replacement of certain elements and structural units.

The emergency repair is rehabilitation of canals, dams and structures or parts of them, destroyed as a result of natural phenomena (mudslides, floods, etc.), or violations of the technical operation rules, execution of which carried out 24/7, and all available material and technical resources and labor resources are mobilized for the execution of emergency repair.

Rehab and (re)construction workloads on the on-farm network canals performed by WUAs contracting a construction company. Repair works expenses and operation of the on-farm network are annually provided by the WUA's budget.

5.5. Desilting of canals and vegetation removal

The solid particles of soil form sedimentation that moved around by water flow. The content of solid particles, per water volume unit, characterizes the water flow saturation with sediments, or its turbidity. Sediments, often, are formed as a result of soil wash-away in the catchment basin via snow/glaciers melting and rain waters. Partly the sedimentation is a product of a canal/river bed and banks erosion. The largest bed's sedimentation with pebbles and coarse sand observed and remain at the head section of a bulk water supply canal. The average sized sediment particles washed into a canal's distribution network and even into on-farm irrigation network. On average, about 80% of sediments remains in the off-farm canals network and about 20% inflows into on-farm irrigation network. A canal's slopes have an impact on sedimentation process, if an inclination is too steep then about 60% of sediments washed in on-farm network and fields. Desilting executed on an annual basis and, if necessary, more often.

6. Environmental impact

Implementation of APNIP is addressed to provide economic, social and environmental benefits to farmers, farming entities and local communities through WUA's development, the rehabilitation and modernization of irrigation and drainage infrastructures in projected areas. The best practices of previous Projects demonstrate positive impacts on the environment. Namely, this Project is aimed at reducing water losses in irrigation schemes, improving water resources management, scaling up agricultural productivity and improving soil fertility. The Project workloads require compliance with a number of mandatory requirements, including strict compliance with noise reduction, air quality, timely removal of solid and liquid domestic waste, construction debris. The requirements for the prevention of environmental pollution and negative impact on the population are provided by the Law of the Kyrgyz Republic "General Technical Regulations for Ensuring Environmental Safety in the Kyrgyz Republic", the Law "On Production and Consumption Wastes", the Law "On Protection of Atmospheric Air", SanPin "Noise in the workplaces, in premises of residential, public buildings and on the territory of residential buildings" the Governmental decree of the KR, dated 11/04/2016. №201,

6.1. Expected positive environmental impact

The positive impact consists of:

- Water losses reduction;
- Improved water resources management, consisting of construction and rehabilitation of water distribution and water-metering structures;
- Scaling up agricultural productivity;
- Improved soil fertility by increasing humus while applying an efficient irrigation schedules.

6.2. Potential negative environmental impact

At the same time, while carrying out irrigation network (re)construction works, there may be some potentially negative impacts on environmental conditions in the projected areas that require attention, preventive actions, and appropriate mitigation measures during planning, development, construction, operation and maintenance. While performing the planned irrigation networks rehabilitation works, no asbestos-containing materials will be used. It is necessary to mention that previously asbestos cement pipe crossings were used. But they were replaced with structures of more inert materials and, at the moment, problems with asbestos-containing materials are not foreseen. Thus, no issues concerning asbestos-containing materials are expected. In the case(s) if asbestos-cement pipes will be detected, asbestos-containing materials will be stockpiled, transported and finally disposed, and specific protective interventions will be executed in

accordance with the hazardous wastes standards handling and disposal. For detailed information concerning the asbestos-containing materials removal, see section 10. The potential negative impacts are relatively minor, and positive economic, social and environmental benefits far outweigh them in environmental assessment. The consideration of these impacts is given below.

6.3. Impact on climate change

The irrigation and drainage schemes rehab will enhance the agricultural and farming practices, improve materially-technical procurement, land owning, pastures and water management, resulting on productivity increase and adaptation to climate change, and sustainable use of natural resources.

Table 2. Assessment and ranking of environmental risks

Activities	Impact	Type	Duration	Term	Degree	Risk	Reversibility	Probability
construction phase								
Construction site location	Soil contamination at a construction site as a result of storage, construction and household waste, including liquid wastes.	direct	short-term	immediate	low	low	reversible	average
	surface water and ground water contamination at a construction site, as a result of stockpiling of construction and household waste, including liquid waste	direct	mid-term	immediate or delayed	low	low	reversible	low
uploading of excavated soil during (re)construction of a canal's bed	the landscape degradation, destruction of the animal world habitat	Direct	Mid-term	Immediate	Low	Low	Reversible	Average
construction materials transportation, heavy machinery use	air pollution and noise impacting the population/workers while heavy machinery and vehicles use	Direct	short-term	Immediate	Low	moderate	Reversible	High
canals rehab	Damage and trees felling and shrubbery cutting	Direct	long-term	Immediate	High	Low	Reversible	High
Operation and maintenance phase								
earth-bed canals and drains cleaning while in operation	landscape and animals' natural habitat degradation	Direct	Mid-term	Immediate	Low	Low	Reversible	Average

increase in irrigation water volumes delivery, which increases the volumes of waste water	surface water pollution with agrochemicals, as a result of excessive application of pesticides and mineral fertilizers	indirect	Mid-term	delayed	moderate	moderate	Reversible	Average
increase in irrigation water volumes increase affects the surface water filtration and GWT	GWT increase as result of excessive irrigation and leads to waterlogging and soils mineralization	indirect	long-term	delayed	moderate	moderate /low	reversible	high
increase in irrigation water volumes supply that leads to water speed increase	soil erosion related to existing agricultural production practices	indirect	long-term	delayed	moderate	moderate	Reversible	Low

7. Environmental management and monitoring plan (EMP)

All the (re)construction phase risks are easily monitored and eliminated. They can be minimized by properly designing mitigation measures and monitoring the Contractor, while executing workloads. The activities undertaken will not affect the existing ecological situation. Before lining of canals, the washed out areas will be restored and further gullying formation will cease. Improving the irrigation system will create optimal conditions in the surface layer (temperature and humidity), reduce deformation of the soil, and improve the local landscape. During the (re)construction work, felling of trees and shrubbery alongside of alienation zones will be executed in accordance with the Water Code (Article 80, para. 3.) requirements, and in agreement with the specially authorized body for environmental protection. Among the O&M risks, the risk of landscape and animals' natural habitat degradation, while cleaning earth-bed canals and drains, is clear and easily controlled. The risks of surface and groundwater pollution by agrochemicals, due to excessive use of pesticides and mineral fertilizers, soil erosion associated with the existing practices of agricultural production, increase of near-surface (shallow) groundwater table, due to excessive irrigation and, as a consequence, soil salinization, require a specific monitoring. The need for environmental mitigation interventions, while on O&M phase, is determined exactly in the process of environmental monitoring.

Table 3: Mitigation plan

Phase	Issue	Preventive/ Mitigation interventions	Cost, US $		Institutional responsibility		Control
			implementation	operation	implementation	operation	
Construction	organizing a construction site	1) it is prohibited to locate a construction site in the water protection zones and canals; 2) to ensure removal of all waste and construction rubble from (re) construction sites to dispose on the authorized municipal landfills, with the permission of local authorities 3) to execute planning and restoration interventions to restore troubled lands during and after completing (re)construction	n/a	Part of the Contract`s (re)construction works 859 559	PIU/Contractor	contractor	1) A Contractor bears responsibility to execute environmental mitigation interventions; 2) A construction site inspections executed by PIU; 3) SAEPF
	earthbed after desilting of a canal	executing rehab and planning works	n/a		PIU/Contractor	contractor	1) A Contractor bears responsibility to execute environmental mitigation interventions; 2) A construction site inspections executed by PIU; 3) SAEPF
	trees and shrubbery	coordinating with the specially authorized environmental protection body on trees and shrubbery felling/cutting located beyond the alienation zones of a canal;	n/a	Part of the Contract`s (re)construction works	PIU/ Contractor	contractor	1) A Contractor bears responsibility to execute environmental mitigation interventions; 2) A construction site inspections executed by PIU; 3) SAEPF
	vehicular emissions into the atmosphere	1) vehicular exhaust systems and construction machinery should be in	n/a	Part of the Contract`s	PIU/CONTRACTOR	contractor	1) A Contractor bears responsibility to execute

		good condition, in order to minimize air pollution; 2) Limiting the speed of vehicles and selecting suitable transportation routes to minimize dust emissions; 3) Moisturizing the road surface while driving through the residential area territories		(re)construction works			environmental mitigation interventions; 2) A construction site inspections executed by PIU; 3) SAEPF
	noise impact within labor area	machinery and equipment operation	n/a	Part of the Contract`s (re)construction works	PIU/CONTRACTOR	contractor	1) a contractor bear responsibility to execute workers' health and safety activities; 2) SAEPF
	Workers' and rural population health and safety	1) construction sites will be equipped with information and designator boards concerning working regulations and requirements; 2) easily accessible and complete first aid kit to treat an injury. 3) ensuring personal protection equipment (helmets, protected shoes, gloves); 4) limiting access to (re)construction sites, zones, equipment locations and other potentially dangerous places by local citizens.	n/a	Part of the Contract`s (re)construction works	PIU/CONTRACTOR	contractor	1) a contractor bear responsibility to execute workers' health and safety activities; 2) SAEPF
operation	threats to water quality due to water contamination with agrochemicals	- conducting training(s) on improved pest control/pesticides application practice. - Application of agrochemicals in accordance with recommended standards - Prevention of waste water ingress into canals and surface water bodies	n/a	n/a	AAS/AISP	WUA members	RSU on-site check, compliance and coordination with SAEPF RSU on-site check, compliance and coordination with SAEPF

	increase of soil erosion climate change impact	- training(s) on water use and soil management. - awareness raising campaign; - adequate use of irrigation water and irrigation in accordance with irrigation schedule; - lining up of irrigation furrows on the lowest slopes (transverse furrows); - shortened furrows length; - change or irrigation technology (sprinklers, drip irrigation). - climate change mitigation measures training; - compliance to irrigation norms and regimes	n/a n/a	n/a n/a	AAS/AISP AAS/AISP	WUA members WUA members	RSU on-site check RSU on-site check,

Table 4. Environmental monitoring plan

Project Phase	Parameter	Location	Method/ Equipment	Frequency	Objective	Costs		Responsibility	
						Organization	Performance	Organization	Performance
baseline	salinity, concentration of hydrogen ions (pH), water turbidity	the head and tail end of irrigation system of r. Kara-Coin	Field equipment for parameters measurement	At the beginning, in the middle and at the end of vegetation season	Rehabilitation works and agricultural activities impact assessment	0	insignificant	RSU takes samples	water sampling and analysis
construction	Site-specific EMP	subProjects under rehabilitation	Visual inspection of subProject	Before, during and after completion of construction	Compliance with environmental protection measures	0	Insignificant	PIU/Contractor	PIU/Contractor
	Salinity, concentration of hydrogen ions, turbidity	Canals under rehabilitation, located upstream and downstream of the rehabilitation site	Field equipment for parameters measurement	prior and after construction workload completion	assessment of construction works impact	0	insignificant	RSU	water sampling and analysis. Introduction of results to PIU
	Pollution of watercourses by petroleum, oil and lubricants	Selectively for subProjects when suspected of contamination. Downstream of rehabilitation subProject	Sample for laboratory analysis	During construction	Civil works impact assessment	0	100 USD	Contractor	Accredited laboratory Water sampling and analysis. Introduction of results to PIU
operation	the salty content in the soil	problematic locations	soil sampling /analysis	quarterly	soil quality ratio	0	USD 300	AHS	AHS

	Salinity, concentration of hydrogen ions, turbidity	the head section of WUAs - r. Kara-Coin irrigation system	Field equipment for parameters measurement	prior and at the end of the vegetation season	irrigation and waste waters quality grading	0	Insignificant	RSU	RSU

8. Stockpiling, transportation and disposal of asbestos containing materials

Asbestos-containing materials disposal will be executed in accordance with the local legislation, including construction standards, occupational health and safety regulations, emissions of harmful substances into the atmosphere, disposal/removal of construction and hazardous wastes (in cases of a specific domestic legislation absence, the European Parliament Directive 2003/18/EU, which amends and updates the EU Directive 83/477/EEC on protection of workers against workplace exposure to hazards from asbestos and asbestos containing materials: the air pollution thresholds are 0.1 fiber/cm³, and also use the recommended standards Notes: Asbestos: "Health problems at the workplace and in the community", the World Bank). The asbestos materials are subject to immediate unconditional disposal/entombment in special conditions.
In accordance with the Government of the Kyrgyz Republic's Order No. 885 "On Management of Hazardous Wastes in the Kyrgyz Republic, December 28, 2015," asbestos-containing wastes should be disposed the following order:

In accordance with the Government of the Kyrgyz Republic's Order No. 885 "On Management of Hazardous Wastes in the Kyrgyz Republic, December 28, 2015," asbestos-containing wastes should be disposed the following order:

- The process of handling hazardous wastes (waste lifecycle) consists of the following stages: generation, accumulation (collection, temporary storage, stockpiling), transportation, neutralization, recycling, reuse of processed products and disposal/entombment.
- If there is asbestos on a construction site, it should be clearly marked as a hazardous material. Asbestos-containing materials should not be cut or destroyed, as this leads to dust formation. During the (re)construction, all workers should avoid crushing/destroying the asbestos-containing waste, store such waste(s) in designated areas on a construction site and properly dispose thereafter in a special place or landfill.
- When asbestos-containing wastes are to be temporarily stored at a designated area(s)/construction site, they should be properly placed in sealed containers and marked appropriately as a hazardous material. Precautions must be taken to prevent unauthorized disposal of such wastes from a designated area/site.

8.1. Storage and stockpiling

- The asbestos containing materials extraction should be minimized through the use of efficient technologies
- All asbestos containing materials should be recycled and disposed by the experienced specialists. The specialists are obliged to wear protective outfit (face masks, gloves, uniform)
- The stockpiled wastes, on a designated area(s), should not exceed established volumes/requirements.
- The access roads for removal of industrial and construction wastes from a designated area(s) should not be obstructed.
- While handling asbestos containing wastes, all operating staff members should wear protective outfit (facemask, gloves etc.). Prior to removal of asbestos waste (if necessary) the stockpiled area should be treated with a moisturizing agent to minimize emission of asbestos containing dust. Disposed asbestos should not be reused.
- Storage of inappropriate items, individual protective or working outfit is strictly prohibited at the designated asbestos waste(s) locations.
- During handling operations, all workers should strictly follow the asbestos treatment requirements, and health and safety requirements. All operations should be executed with the use of mechanized machinery, elevating and transportation equipment.

- The superficially equipped Vehicles to the landfill locations, either contracted, or owned, should transport hazardous waste. The Vehicles should be designed and used in such a way, as to prevent possible incidents, losses and pollution of the environment, both on the way to the disposal site location, and during the (re)loading of waste from one vehicle onto another. All types of handling and transportation of waste operations from/to the main and supporting facilities should be mechanized, and an airtight equipment used. It is strictly prohibited, during the transportation, to open the hazardous waste containers.
- Solid and dusty wastes are the subject of transportation in a specially designed containers, equipped with gripping devices for (un)loading by cranes. The transportation of asbestos wastes on the open-bed vehicles and railway cars is strictly prohibited.
- The use of hooks and other sharp tools, while processing the waste, is strictly prohibited.
- The driver of the Vehicle, transporting hazardous waste and authorized accompanying staff only, are allowed on the Vehicle(s). the Driver(s) must be aware of the safe transportation requirements.

  All handling, transportation, (un)loading and disposal of waste must be mechanized. The waste must be transported in such a way, as to prevent transport losses and impact on environment.

8.2. Disposal of asbestos containing wastes

Asbestos-containing waste must be disposed in municipal solid waste dumps or non-recyclable industrial solid waste damp-yards.

9. Legislative support

In the Kyrgyz Republic, there are a number of environmental protection laws, regulations and requirements, which address specific issues of environmental protection. Table 5 summarizes the legal norms relevant to this Project.

Table 5: The main subordinate legislations, regulations and requirements

Legal authority	Legal mandate
Constitution (2010)	The state's ownership of natural resources, rights and duties of citizens.
Water Code of the Kyrgyz Republic (2005)	It identifies the state policy, legislative and institutional basics on water resources management and protection
Law on environmental protection (1999)	It identifies state policy on environmental protection, legislative and institutional basics on water resources management and environmental protection
Law "General technical regulation on ensuring environmental safety in the Kyrgyz Republic" (2009)	The Regulation determines the main provisions of technical regulation in the field of environmental safety and establishes general requirements for ensuring environmental safety while designing and implementing of interventions within economic and other types of production activities, storage, transportation and production disposal.
Law on environmental expertize (1999)	It requires review of environmental protection issues (environmental appraisal) and prevents negative environmental impacts and human health as a result of economic and other activities
Law on specifically protected natural reservations (2011)	It establishes regulations for specially protected natural areas, various types and/or levels of economic activity.

Law on protection of atmosphere (1999)	It regulates emissions to atmosphere and specific obligations on protection of atmosphere
SanPin "Noise on the workplaces, in premises of residential, public buildings and on the territory of residential buildings" the Governmental decree of the KR, dated 11/04/2016. №201,	Establishes a sanitary-epidemiological requirements, standardized parameters and maximum permissible noise levels at (re)construction sites, noise classification, permissible noise levels in the Projected rooms, (re)construction sites, (re)constructed and operated residential, public buildings and on the territory of residential buildings.
the GovKR. Provision No.224 of 03/05/2013. "On approval of fees for calculating the amount of penalties for damages caused to objects of animal and plant life, mumijo-containing mineral materials and mushrooms by legal entities and individuals"	Fees designed to ensure preservation of biodiversity, proper protection of flora and fauna

The Government of the Kyrgyz Republic ratified a series of international conventions on environmental protection and agreements, related to this Project:

- Convention on environmental impact assessment of the transboundary territories Espoo(2001);
- Agreement on cooperation in environmental protection and efficient use of natural resources (Kyrgyz Republic, Kazakhstan, Uzbekistan) (1998),
- Convention on wetlands, representing the international importance for the waterfowls main habitat (Ramsar Convention) (2002);
- Convention on right to use international watercourses as transport routes (1997), Agreement on the use of water structures for interstate purposes on the Chu and Talas Rivers (Kyrgyz Republic and Kazakhstan) (2000);
- the United Nations Framework Convention on Climate Change (2000 г.);
- Kyoto Protocol (2003).

10. Awareness rising campaign, consultations and public attendance

10.1. Public consultations

In accordance with Operational Procedures OP4.01.[1] The WB has special requirements for disclosure of information and public consultations. The disclosure includes introduction of information about the Project affected population (PAP) and other stakeholders, from the Project's early implementation cycle, and throughout lifecycle of the Project. The information disclosure is intended to facilitate comprehensive interaction with the Project affected population, and stakeholders throughout the lifecycle of the Project. Moreover, the Kyrgyz Republic is a member of the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, the United Nations Economic Commission for Europe, which also contains provisions for ensuring the disclosure of the objectives and environmental considerations of the Project.

The Public hearings in WUA "Bash-Keltebek" held on June 14.2018, AO Kazbek, At-Bashy rayon, Naryb oblast, which was attended by 31 people; WUA reresentatives, local authorities, farmers, WUA RSU, design engineers, PIU. The public hearings delivered a general info on the Project, as well as

[1] The World Bank operational procedures 4.01, "Environmental Assessment", Para. 3.

technical solutions and activities that will be undertaken to prevent and mitigate impact(s). the attendees asked several questions on EMP. The Minutes of the public hearings and images applied.

10.2. Grievance redress mechanism (GRM)

Objective. The primary target of GRM and population's statements is identification, registry and assistance in solving complaints that were stressed during the Project activities.

The GRM main principles are:

(i) Protection of Citizens' rights;
(ii) Transparency;
(iii) Accessibility to a free GRM mechanism and without follow-up prosecution;
(iv) Appropriateness, from the point of local cultural sensitivities view;
(v) Personal responsibility for the performance duties;
(vi) Accountability of during the GRM consideration and applications by the PIU.

Complaints and applications filed in accordance with the established procedure are subject to a mandatory review, refusal to admit is not allowed. Complaints and applications of citizens, without indication of the name and postal address, to which the reply should be sent, are considered anonymous and are not subjected to revision.

The GRM does not hinder the right of citizens to applying into the Judiciary authorities. Citizens have the right to apply to the court, or other state bodies for the resolution of emerging issues related to the violation of their rights, emerged under the Project.

For the GRM implementation, the PIU and WUA created a register of complaints and statements from the population. Moreover, anyone can apply to the PIU in an online format at:
https://mail.rambler.ru/m/redirect?url=http%3A//apnip.water.kg/%25D0%25BE%25D0%25B1%25D1%2580%25D0%25B0%25D1%2589%25D0%25B5%25D0%25BD%25D0%25B8%25D1%258F-%25D0%25B8-%25D0%25B6%25D0%25B0%25D0%25BB%25D0%25BE%25D0%25B1%25D1%258B/&hash=8ef50d487d10168e5d891f2d9dd443cd

10.2.1. General GRM process

- In the process of the assets assessment, PAP will be introduced to the information concerning filing and reviewing procedure.
- The first step in the process of handling complaints will be a personal verbal appeal to the Project representative, AO's authority, or by phone (the mobile phone number will be provided on the information board of AO's office, and also posted in ads in places frequented by the population). If the problem cannot be resolved within 5 days, consideration of the complaint will be done at the next level.
- An aggrieved person can file a complaint on the issue related to the process of resettlement or compensation, in written from, to the PIU APNIP Director. A complaint must be signed and dated by an aggrieved party. The APNIP social affairs consultant will maintain a direct link with the PAP. The PIU will determine the validity of a complaint and notify an aggrieved person that he/she will be assisted. The answer will be provided within 14 working days, during which meetings and discussions will be held with an aggrieved person.
- If a complaint concerns an asset assessment at the expense of the Project, a secondary or even a third assessment of an asset will be carried forward, until it is accepted by both parties. The follow-up assessments can also be carried forward by and independent appraiser(s) at the expense of an aggrieved party. The PIU will assist to an aggrieved party at all stages to resolve a complaint and ensure that a complaint is treated the best-of-breed.
- If, after receiving a response from the PIU, an aggrieved party remains unsatisfied, then a complaint is considered in the working group of the Project under AO, which will be

established by the head of AO's resolution, from the members of the Local AO deputies, WUAs representatives, local dignitaries and the PIU specialists.

- In case of an objection, regarding to the working group decision, which is provided within 30 working days, the PAP may appeal to the court.

10.2.2. A registered complaint management

A local representative of the Project should ensure a weekly transfer of received complaints from the PAP to the PIU, as well as the first instance consideration result(s). The local authorities should work with complaints in accordance with the established order and should file the complaints and proposals in the processing registry. The PIU upon receipt of an information, the social consultant should ensure that each complaint has an individual identification number and a progress report in reviewing each complaint reflected in the FRP, which identifies a person(s) responsible for each individual complaint and recording the dates of the following events:

• the date of filing a complaint;
• the date of entering a Complaint(s) Registry in the Project database;
• the date when the information on the proposed solution measure(s) was sent to an aggrieved party (if applicable);
• the response date to an aggrieved party.

The general information on complaints received (number, type of complaint), progress in resolving it and problems encountered, should be included in the Project's periodic reporting submitted to the World Bank.

Annex 1. The minutes of Public hearings

The minutes of public hearings on environmental protection and social issues in WUA "Bash-Keltebek", At-Bashy rayon, Naryn oblast, the World Bank project "APNIP"

v. Kazabek, Kazybek AO **June 14. 2018**

attendees:
Mamytov B. – Head of Kazybek AO;
Neronova T. – National environmental consultant, PIU APNIP;
Abdygaziev M. – Design engineer, PIU APNIP, Naryn oblast;
Kurmanbekov A. – WUA «Bash-Keltebek» , Director;
Junusaliev E. – Naryn oblast OSU Head;
JUmabaev M. – WUA Council Chairperson.

The public hearing was attended by 31 people; waterusers, representatives from farming entities, WUA members. The list of attendees is applied.

Chairperson – Мамytov B. – Head of Kazybek AA

Abdygaziev M. – spoke about the Project and introduced all rehab activities planned for on-farm network within APNIP.

Neronova T. - has explained about the Kyrgyz Republic's environmental legislation requirements and the World Bank's policy on environmental protection under the Project. The task of environmental assessment is to identify the Project's significant impact on the environment (positive and negative), identify appropriate preventive measures and mitigation measures aimed at preventing, minimizing or eliminating any expected irreversible impact(s). The experience of previous projects shows the positive impact of the Project on the environment. In fact, many positive impacts of projects have been identified during the environmental assessment. Namely, this Project is aimed at reducing water losses in irrigation schemes, improving water management, scaling up agricultural productivity and improving soil fertility.

At the same time, while carrying out civil works on (re)construction of irrigation networks, there may be some potentially negative impacts on environmental protection conditions in projected areas that need attention, to undertake preventive actions and appropriate mitigation measures during planning, development, construction, operation and maintenance.

- No asbestos-containing materials will be used for the planned rehabilitation of irrigation networks, noting that previously asbestos-cement pipe crossings were used. But even in the past years they were dismantled and replaced with structures of more inert materials. Thus, no problems with asbestos-containing materials are expected.
- Potentially negative impacts are relatively small and positive economic, social and environmental benefits far outweigh them in environmental assessment. Consideration of these impacts is given below.

The main impact(s) that can be seen as a result of the civil works:

1) Soil pollution on construction site.
2) Groundwater pollution on construction site.
3) Deterioration of the landscape, destruction of the natural habitat of the animal world, changing the local drainage network.
4) Air pollution and impact on workers/population during traffic and heavy equipment

operation.

The site specific EMP is composed for each of the rehabilitation subproject to prevent or mitigate the negative impact of the construction works. It includes a mitigation and monitoring plan, both for the construction phase, and for the O&M phase. All the risks of the (re)construction phase are easily controlled and eliminated. They can be minimized by properly designing mitigation measures and controlling the Contractor, while carrying out the works.

Among the risks of operation and maintenance phase (O&M), the risk of degradation of the landscape and destruction of the animal world's natural habitat, while cleaning unlined canals and drains is obvious and easily controlled. The risks of surface and groundwater pollution by agrochemicals, due to excessive use of pesticides and mineral fertilizers, soil erosion, associated with existing practices of agricultural production, groundwater table rising in the shallow zone due to excessive irrigation and, as a consequence, salinization of soils, require special monitoring. The need for mitigating measures at the stage of O&M is determined precisely during the process of environmental monitoring. Each WUA included in the rehab program should maintain a register of complaints and to date, almost all WUAs have it. Moreover, all WUAs have a complaint form and a complaint management matrix. In addition, the PIU site (www.apnip.water.kg) has a separate section on appeals and complaints, where anyone can send their appeal or complaint about the Project's activities. For effective monitoring and management of complaints and appeals of the population, the PIU maintains a database of complaints and appeals.

Questions:

Kaipov D. – there is a housing facility located on one of the canals, will the (re)construction activities impact that?

Neronova T. – we will stress that issue to the PIU and they will consider it. Solution will be made.

Ydyrysov A. – what is the water protection zone of the off-farm canal?

Neronova T. – according to the Gov.KR resolution, the canal`s water protection zone is set depending on canal`s capacity. The OVK set out for the on-farm canals a water protection zone.

Belekov B. – what quarry will provide sandy-gravel mix (SGM)?

Abdygaziev M. – SGM will be provided by the quarry mentioned by the AO.

Mukashev U. – who will execute the current repair of canals after rehab? Who will monitor (re)construction works.

Neronova T. – member of WUA will execute controlling functions. the PIU, DWRLI, SETI will control (re)construction works.

WUA «Bash-Keltebek» Director – whether it is necessary to receive permission to cut greenery, if they are in the canal`s alienation zone.

Neronova T. – While examining the areas under rehab, it was found that there are sections of canals where tree and shrubbery vegetation within the canals' alienation zone that must be removed. If this question arises during the (re)construction, the WUA has to compose the formal letter to the Osh oblast environmental protection department, and they will consider this issue. If there is a new construction, it is necessary to obtain a permit for cutting green plantations.

Junusaliev E. – whether canal`s water quality monitoring will be carried forward?

Neronova T. – the water monitoring will be executed by RSU, at the monitoring points mentioned in the EMP. Also during operation of a canal water quality is also subject to monitoring such as; mineralization, concentration of hydrogen ions (pH), turbidity of water, suspended substances.

In conclusion, all attendees have supported the implementation of this project.
Mamytov B. the Chairperson on behalf of all attendees has expressed his gratitude for the support and information provided.

Chairperson **Mamytov B.**

National Environmental protection consultant **Neronova T.**

Протокол общественных слушаний по охране окружающей среды и социальным вопросам в АВП «Баш-Келтебек» Ат-Башинского района Нарынской области в рамках проекта Всемирного Банка ««Улучшения сельскохозяйственной производительности и питания»

С. Казыбек, Казыбекский а/о **14 июня 2018г.**

Присутствовали:
Мамытов Б.Ж. – глава Казыбекского аильного округа;
Неронова Т.И. – консультант по охране окружающей среды ОРП УСПП;
Абдыгазиев М. – инженер проектировщик по Нарынской области ОРП УСПП;
Курманбеков А. – директор АВП «Баш-Келтебек»;
Жунусалиева Э. – начальник Нарынского областноого отдела поддержки;
Жумабаев М. – председатель совета АВП.

В общественных слушаниях приняли участие 31 человек: водопользователи, представители крестьянских хозяйств, фермеры, члены АВП. Список участников общественных слушаний прилагается.

Председатель собрания – Мамытов Б.Ж. – глава Казыбекского а/о

Абдыгазиев М. – инженер проектировщик по Нарынской области ОРП УСПП выступил с информацией о проекте, в которой рассказал о предполагаемых работах по реабилитации внутрихозяйственной сети в рамках проекта «Повышение производительности в сельском хозяйстве и улучшение питания».

Неронова Т.И. - консультант по охране окружающей среды ОРП УСПП рассказала участникам общественных слушаний о проекте УСПП и его компонентах, а также о требованиях природоохранного законодательства Кыргызской Республики и политике Всемирного Банка по охране окружающей среды при реализации проекта.
Задача оценки окружающей среды заключается в том, чтобы выявить существенное воздействие предлагаемого проекта на окружающую среду (позитивное и негативное), определить соответствующие превентивные меры и меры по смягчению воздействия, направленные на предупреждение, минимизацию или устранение любого ожидаемого необратимого воздействия.
Опыт предыдущих проектов показывает положительное воздействие предлагаемого проекта на окружающую среду. В действительности, в ходе оценки окружающей среды выявлено много положительных воздействий проектов. А именно, данный проект направлен на сокращение водопотерь в ирригационных системах, улучшение управления водными ресурсами, повышение сельскохозяйственной производительности и улучшение плодородия почв.
Вместе с тем, при проведении строительных работ по реконструкции оросительных сетей, возможны проявления некоторых потенциально негативных воздействий на условия охраны окружающей среды в проектных площадях, на которые необходимо обратить внимание, принять превентивные действия и соответствующие меры по их смягчению во время планирования, разработки, строительства, эксплуатации и технического обслуживания.

- При выполнении планируемых работ по реабилитации оросительных сетей не будут применяться никакие асбестосодержащие материалы. Отметим, что ранее применялись асбестоцементные трубчатые переезды. Но еще в прошлые годы они были демонтированы и заменены на сооружения из более инертных материалов.

Соответственно никаких проблем с асбестосодержащими материалами не ожидается.

- Потенциальные негативные воздействия являются относительно незначительными, а позитивные экономические, социальные и экологические выгоды значительно перевешивают их в оценке окружающей среды. Рассмотрение этих воздействий приводится ниже.

Основное воздействие, которое может быть оказано в результате ведения строительных работ:

1) Загрязнение почв на строительной площадке
2) Загрязнение подземных вод на строительной площадке
3) Ухудшение ландшафта, разрушение естественной среды обитания животного мира, изменение локальной дренажной сети
4) Загрязнение воздуха и воздействие на рабочих/население при движении транспорта и работе тяжелой техники

Для предотвращения или смягчения негативного воздействия строительства для каждого объекта реабилитации составляется ПУОС. Он включает в себя план смягчающих мер и мониторинга, как для фазы строительства, так и для фазы ЭиТО.

Все риски фазы строительства легко контролируются и устраняются. Они могут быть сведены к минимуму при должном проектировании смягчающих мер и контроле над Подрядчиком при выполнении работ.

Из рисков фазы эксплуатации и технического обслуживания (ЭиТО) риск ухудшения ландшафта и разрушения естественной среды обитания животного мира при чистке земляных каналов и дрен является явным и легко контролируемым. Риски загрязнения поверхностных и подземных вод агрохимикатами вследствие избыточного использования пестицидов и минеральных удобрений, эрозии почв, связанной с существующей практикой ведения сельского производства, повышения уровней грунтовых вод в зоне их не глубокого залегания в связи с избыточным орошением и, как следствие, засоления почв, требуют специального мониторинга. Необходимость в смягчающих мерах на стадии ЭиТО определяется именно в процессе экологического мониторинга.

Каждая АВП, вошедшая в программу реабилитации должна вести журнал регистрации жалоб. На сегодняшний день почти во всех АВП имеется такой журнал. Кроме этого во всех АВП есть форма предоставления жалоб и матрица управления жалобами.

В дополнении к этому, на сайте ОРП (www.apnip.water.kg) есть отдельный раздел по обращениям и жалобам, куда любой желающий может направить свое обращение или жалобу по проводимым проектом мероприятий.

Для эффективного осуществления мониторинга и управления обращениями и жалобами населения, ОРП ведет базу данных по обращениям и жалобам.

Вопросы:

Каипов Д. – на одном из каналов находится жилой дом. Не нанесет ли ущерб строительство этому дом?

Неронова Т. И. – Мы передадим этот вопрос в ОРП и они будут рассматривать его. Затем будет принято решение.

Ыдырысов А. – какая водоохранная зона у мх канала?

Неронова Т.И. – согласно постановления ПКР, водоохранная зона канала устанавливается в зависимости от пропускной способности канала. Областное управление ВХ рассчитывает для внутрихозяйственных каналов водоохранную зону.

Белеков Б. – из какого карьера будет браться песчано-грвийная смесь (ПГС)?

Абдыгазиев М. – ПГС будет браться из карьера, который будет согласован с айыл окмоту.

Мукашев У. - кто будет осуществлять текущий ремонт каналов после реабилитации? Кто будет вести контроль за строительными работами?

Неронова Т. – ремонт будет вести члены АВП. Контроль за строительными работами будет вести ОРП ДВХ, Госэкотехинспекция.

Директор АВП «Баш-Келтебек» - надо ли получать разрешение на вырубку зеленых насаждений, если они находятся в зоне отчуждения канала?

Неронова Т.И. – При обследовании реабилитируемых участков, было установлено, что зеленые насаждения, подлежащие вырубке в зоне ведения работ, отсутствуют. Если такой вопрос возникнет в ходе ведения работ, АВП необходимо подготовить письмо в Ошское областное управление охраны окружающей среды, и они согласуют вырубку.

Жунусалиева Э. - отдел поддержки АВП Нарынской области – будет ли вестись мониторинг воды в канале?

Неронова Т. – мониторинг будет вести районный отдел поддержки АВП в точках мониторинга, которые будут указаны в ПУОС. Также мониторинг будет вестись постоянно в период эксплуатации: Минерализация, концентрация ионов водорода (pH), мутность воды.

В заключении, все собравшиеся поддержали реализацию данного проекта.
Мамытов Б.Ж. от имени всех присутствующих поблагодарил за поддержку и предоставленную информацию.

Председатель **Мамытов Б.Ж.**

Консультант по охране окружающей среды **Неронова Т.**

Спи сок участников общественных слушаний по охране окружающей среды и социальным вопросам в АВП «Баш-Келтебек» Ат-Башинского района Нарынской области в рамках проекта Всемирного Банка ««Улучшения сельскохозяйственной производительности и питания»

С. Казбек, Казбекский а/о **14 июня 2018г.**

№№ пп	Фамилия имя отчество	Телефон	Подпись
1.	Маматов Бекболот	0707921918	
2.	Курманбеков А.	0707556127	
3	Омуралиева А.	0705 89 84-92	
4	Экумабаев Мирбек	0700035050	
5	Маманаев К.	0707681912	
6	Мусаева. А	0707 150883	
7	Бактыгулов Эркек	0706 41 33 62	
8	Идырысов. А	0708481085	
9	Шамырканов Б.	0703831327	
10	Стамакунов А.	------	
11	Тентимишов А.	705115801	
12	Мукашов. А	772826463	
13	Таалайбаев. А	778192879	
14	Жайболотов М.	0702373149	
15	Исирупов Ж	0701. 52. 92. 52	
16	Жумаев К.	0702403387	
17	Кочконбек к. Н.	0708456001	
18	Атайбек кызы Айгул	07028545-08	
19	Каватов Эрмекбек	07[illegible] 254662	
20	Белеков Болотбек	0702 504414	
21	Нурманбетов. Т.	0505017788	
22	Жумукалиев К		
23	Жусубалиев Т.	0703141162	
24	Жоноров. О.	0707 311182	
24	Мамеетов М	0708 670569	
26	Жасыпов. Т	0708022424	
27	Айдарбеков А.	0707801363	
28	Абдыкулов М.	0770557272	
29	Жумакамиева А.	0707 825444	
30	Нерашова Т.И	0772335751	
31	~~Нерашова Т.~~ И.		
32			
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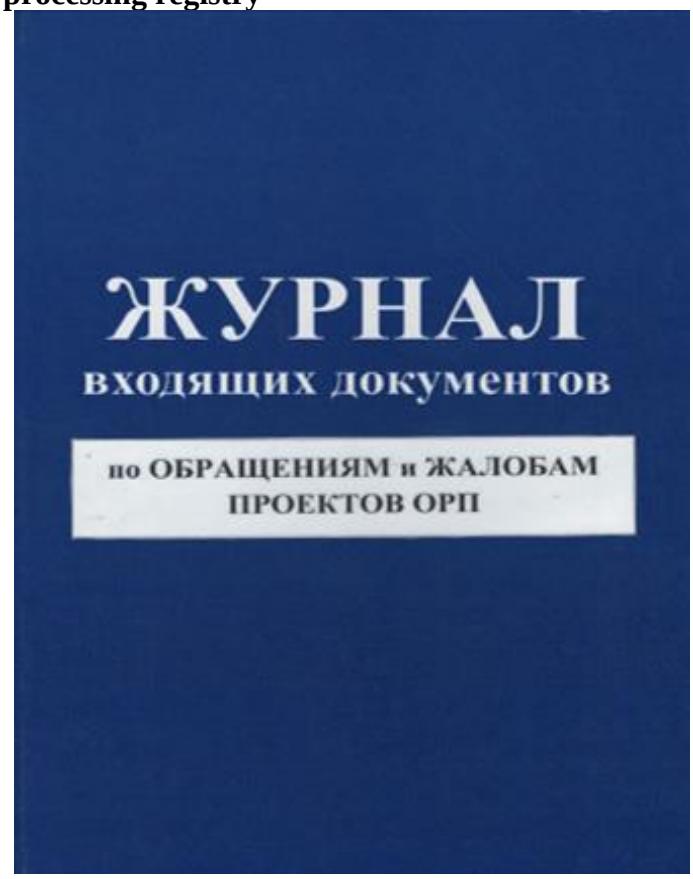
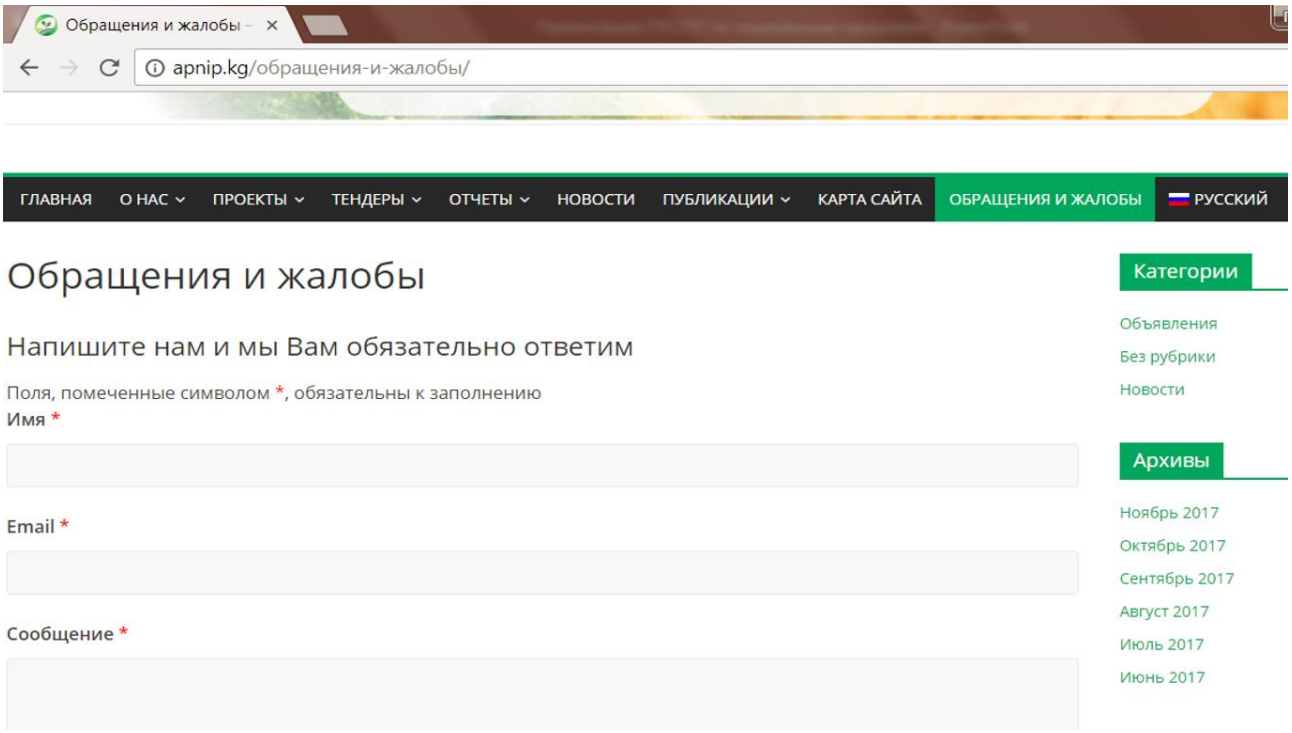
Annex 2. Complaints processing registry



ФОРМА ПРЕДОСТАВЛЕНИЯ ЖАЛОБ

Информация о заявителе
ФИО _____
Адрес:_____ _____ _____
Контактные данные: **тел :**_____ **эл. почта:** _____
Содержание жалобы/обращения/предложения:
Дата подачи жалобы: _____ **Дата рассмотрения жалобы:** _____ **Результат рассмотрения:** _____ _____ _____
Подпись _____ Дата _____

Annex 2. On-line application for registering a complaint



11. Images of canals in existing condition

Picture 1. «Kytat-Aryk» canal, June 2018.

Picture 2. Head water intake on canal «Kytat-Aryk», June 2018.

Picture 3. Canal «Bash-Keltebek», June 2018.

Picture 4. Cross-regulator on canal «Bash-Keltebek», June 2018.

12. images of public hearings

Picture 5. WUA «Bash-Keltebek», June 2018, public hearings.

Picture 6. WUA «Bash-Keltebek», June 2018, public hearings.