

Bi-annual Environmental Monitoring Report

January 2018

Loan 3025/3026-UZB: Amu Bukhara Irrigation System Rehabilitation Project

Prepared by the Project Implementation Unit, Ministry of Agriculture and Water Resources, Government of Uzbekistan.

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Bi-annual Environmental Monitoring Report

Project Number: 44458-013

Reporting period: July – December 2017

Uzbekistan: Amu Bukhara Irrigation System Rehabilitation Project

(Financed by the ADB Loan 3025-UZB/ 3025-UZB)

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Project Implementation Unit

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ABBREVIATIONS

ABIS	Amu Bukhara Irrigation System
ADB	Asian Development Bank
BISA	Basin Irrigation System Administration
EEC	Environmental Expert of Consultant
EIA	Environmental Impact Assessment
EHS	Environment, Health and Safety
EMP/ SSEMP	Environmental Management Plan/ Site-Specific Environmental Management Plan
EMMP	Environmental Management and Monitoring Plan
GoU	Government of Uzbekistan
HGME	Hydrogeological Meliorative Expedition
IA	Implementing Agency
IEE	Initial Environmental Examination
ISA	Irrigation System Administration
MAWR	Ministry of Agriculture and Water Resources
M&ES	Monitoring and Evaluation Specialist
NPC	Nature Protection Committee
PIU	Project Implementation Unit
SE	Site Engineer
SC	Supervision Consultant
SO	Safeguards Office
WCA	Water Consumers' Association

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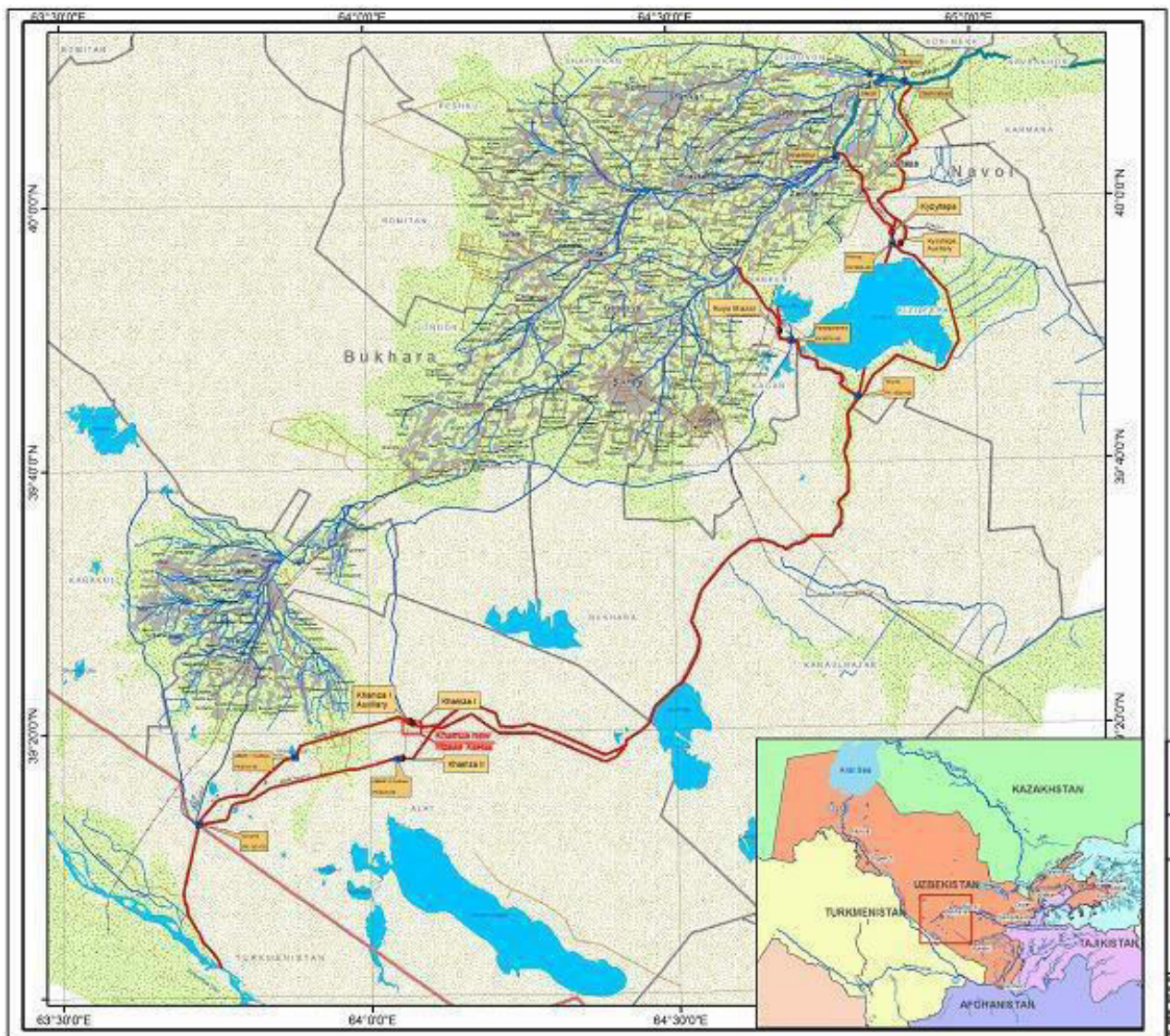
Part I –Introduction

1.1 Project Background

1. The Amu Bukhara Irrigation System (ABIS) Rehabilitation Project is located in the central part of Uzbekistan on the right bank of Amu Darya River bordering to Turkmenistan. Bukhara is 563 km far from the capital Tashkent. The project covers lands of Bukhara and Navoi provinces. The ABIS is very important for the area and gives life as an oasis.
2. The ABIS supplies water to already irrigated lands, cities, settlements, and industries in Bukhara and Navoi provinces through a series of large cascading pump stations and thousands of kilometres of conveyance canals. It also drains the excess water through drainage system outside of the project area.
3. The ABIS, with a command area of 315,000 ha, serves the irrigated lands of the Bukhara Zarafshan and Karakul oases and the Karaul Bazar massif. The population in the ABIS command area is about 1,788,000 people, including 1,550,000 in Bukhara and 239,000 in two districts of Navoi, of which 68% live in rural areas and fully rely on irrigated agriculture. It is very important to supply reliable water to these people in the region. ABIS also supplies water for municipal and industrial purposes.
4. The aim of the Project is to improve the irrigated agriculture and water resources management in the ABIS, with the goal of promoting sustainable economic and social welfare of communities dependent upon ABIS. The Project objectives are:
 - modernization and rehabilitation of obsolete pump stations;
 - increase of conveyance efficiency in ABIS main canal;
 - increase climate change adaptation capacity; and
 - increase efficiency of project management and irrigation system management.
5. In order to realize a sustainable and reliable water supply in ABIS, the Project is expected to achieve the following outputs:
 - a) Construction of one new pump station, and modernization and rehabilitation of four existing ones;
 - b) Increase in the conveyance efficiency of the main canal of ABIS;
 - c) Increase in the capacity of Basin Irrigation System Administration (BISA), Irrigation System Administrations (ISAs), water consumers' associations (WCAs), and farmers to adapt to climate change; and
 - d) Efficient management of project and ABIS.
6. In order to realize the first output of ABISR, there will be two main contracts for civil works. These are:
 - 1) Construction of Amu Bukhara 1 New Pump Station (ABISR/ICB/01)
 - 2) Modernization and Rehabilitation of Kizil Tepa and Kuyu Mazar Pump Stations (ABISR/ICB/03)
7. The second output will be achieved by the implementation of the following construction project: Modernization and Rehabilitation of Amu Bukhara Main Canal Regulation Structures (ABISR/ICB/02).

8. The third output is expected to be delivered by the Technical Assistance Project associated with the project, whereas the activities for achieving the fourth output will comprise project management, institutional, and operational support of Technical Assistance.

Figure 1. Project area map



1.2 Construction activities and project progress during the previous 6 months

9. During the reporting period, the construction activities were implemented for the Contracts ABISRP-02 and ABISRP-04, where the Contract for ABISRP-04 has been completed by October 2017 and Contract ABISRP-02 has almost completed the designs and started construction by the last quarter of 2017.
10. Contracts for Kuyu Mazar Pump Station (ABISRP 03.1) and Kizil Tepa Pump Station (ABISRP 03.2) were signed and became effective by September 2017; however both of them are in design and site establishment stage that no construction activity took place.
11. The main project activities carried out in the reporting period include the following:

Component A: Rehabilitation and Modernization of Pumping Stations

Amu-Bukhara 1 New Pump Station (ABISRP/ICB/01)

- Re-bidding Process for construction of Amu-Bukhara 1 New Pump Station (ABISRP/ICB/01).

Modernization and Rehabilitation of Kuyu Mazar and Kizil Tepa Pump Stations (ABISRP/ICB/03, Lot 1 and Lot 2)

- Contract signed for Modernization and Rehabilitation of Kuyu Mazar and Kizil Tepa Pump Stations (ABISRP/ICB/03) on 21 December 2016 and it has been registered by the new established State Investment Committee. The contracts became effective as of 20th September 2017.

Component B: ABIS Main Canal Conveyance Efficiency

Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP/ICB/02)

- Contract signed on March 18th, 2016 for modernization and rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP/ICB/02).
- The Contractor together with Engineer, designers and PIU completed a detailed survey of all hydraulic structures.
- During the reporting period the Contractor continued preparation of working drawings and got approval for some of the structures and commenced earthworks on some of the structures.
- The construction activities have been started at three different locations which are named Outflow YSK Canal (Peresechenie), Agitma (Tashrabad) and Djilvan during the reporting period of July-December 2017.

Component C: Climate Change Adaptation

Rehabilitation of inter-farm and on-farm pilot irrigation network (ABISRP/NCB/04)

- The Contractor has completed the construction of water structures on Kukin, Utabek nad Lowe Gaziobod canals.
- The Contractor has completed the construction of observation wells in Vafo, Dilnoz Ugli Abdukhalil and Yomgir farms and booster wells at Dilnoz Ugli Abdukhalil and Yomgir farms.
- The Rehabilitation of inter-farm and on-farm pilot irrigation network (ABISRP 04) Contract has been completed on October 27th, 2017.

Drip Irrigation System

- A shopping contract for Drip Irrigation System for the demonstration plots has been signed with the Company “Debyut”, which has submitted the designs and procured the materials. By the time of reporting period Debyut has installed drip irrigation systems: in demonstration site Nr 1 on 2.8 ha for peach trees; in demonstration site Nr 2 on 4.6 ha for plumb trees; and in demonstration site Nr 3 on 4.3 ha for vineyard. In general, 90 percent of works have been completed.

The capacity building of Basin Irrigation System Administration, Irrigation System Administrations, Water Consumers’ Associations, and farmers

During the reporting period the consultant’s field office team including agronomist, extension specialist, WCA specialist, and institutional development specialist have provided comprehensive services related to demonstration activities. In particular the following regular services have been provided by the Consultant:

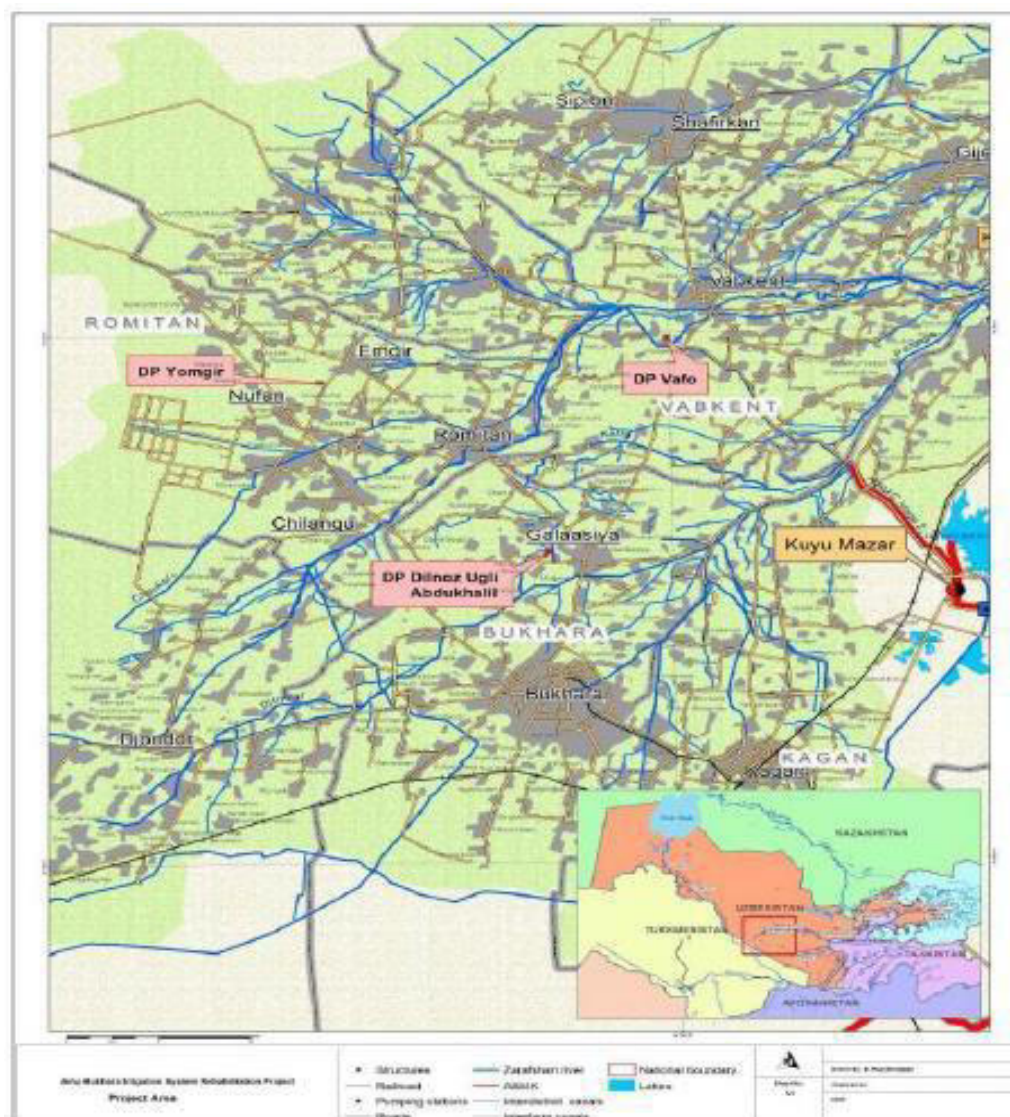
- Monitoring of efficiency of demonstration sites related to practicing of water saving technologies and dissemination of such methods in other farms and WCA’s.
- Cooperation and provision of trainings to WCA’s ISA’s and BISA in the area of adaptation to climate change and water saving technologies including integrated water resource management principles.
- Awareness campaigns in ISA and WCA’s for minimum tillage and climate change adaptation measures.
- Agronomical consultations in three demonstration sites including: accurate watering of cotton with an account of soil moisture and soil salinity, introduction of minimum tillage, introduction of crop rotation etc.
- Approval design and supervision of installation of drip irrigation system on three demonstration sites.
- Consultations on establishing and maintenance of new intensive orchards and tree belts in demonstration sites. Consultations related to ground water management on demonstration sites.
- Monitoring of cotton, and vegetable yield in demonstration farms.
- Preparation of training programs for water saving, sprinkler and drip irrigation, mulching technics, crop rotation, minimum tillage and other agronomical technics.
- Monitoring of payments for the provided irrigation services.
- Practical trainings for the irrigation specialists of WCA’s and ISA’s under the topics of “Water measuring”, “Water saving technologies”, and “Integrated water resource management”. The practical trainings have been conducted in Vobkent, Kyzyltepa and Karakul districts of Bukhara province. The participants have received special certificates.
- The draft climate adapted water management plan for the ABIS; working paper Nr 4- operation and maintenance of irrigation and collector drainage network; working paper Nr 5- organization of water accounting in WCA’s have been prepared.
- The consultant has started collection of data for preparation of general and particular water-salt balance of irrigated lands in Bukhara.

12. Project organization for the awarded contracts for constructions works listed above is given in the table 1 below.

Table 1: Awarded contracts within Amu-Bukhara Irrigation System Rehabilitation Project

Item	Contract name	Contractor's name	Consulting company	Number of Contract	Date of signing	Duration of contract
1.	Modernization & Rehabilitation of Amu Bukhara Main Canal Regulation Structures	Consortium LLC "KogonSuvQurilish" and JSC "Amubukhorokanalkurilish"	«Temelsu International Engineering Services Inc.» «Sheladia Associates Inc.»	ABISRP 02	March 18, 2016	1080 days
2.	Modernization and Rehabilitation of Kuyu Mazar and Kizil Tepa Pump Stations	JV Hebei Construction Group Co. Ltd / Hebei Water Conservancy Engineering Bureau	«Temelsu International Engineering Services Inc.» «Sheladia Associates Inc.»	ABISRP /03 (Lot1 & Lot 2)	December 21 2016 Effective: September 20 2017	1095 days
3.	Civil works for Inter-farm and On-farm Irrigation system	LLC "KogonSuvQurilish"	«Temelsu International Engineering Services Inc.» «Sheladia Associates Inc.»	ABISRP 04	June 30, 2016	426 days

Figure 2. Project ABISRP pilot areas location



13. Project organization for the awarded contracts listed above is given in the table 2 below.

Table 2: Construction Activities Carried out During Reporting Period (July-December 2017)

Site	Construction Activity	Physical Progress (%)
<u>Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structure (ABISRP 02)</u>		<u>13.08</u>
Agitma Regulator (Tashrabad)	Construction of Temporary Bypass Canal	-
	Construction of Regulating Structure	-
Regulator Outlet to Kuyu Mazar Canal (Peresechenie)	Cleaning of Kuyumazar Canal	-

Site	Construction Activity	Physical Progress (%)
Djilvan Regulator (Djilvan)	Construction of Regulating Structure	xx
<u>Rehabilitation of inter-farm and on-farm pilot irrigation network (ABISRP 04)</u>		<u>100</u>
Kukin canal	Construction of water structures	100
Utabek canal	Construction of water structures	100
Lower Gazobod canal	Construction of water structures	100
Vafo Farm	Construction of observation wells	100
Dilnoz Ugli Abdukhalil Farm	Construction of observation wells	100
	Construction of booster wells	100
Yomgir Farm	Construction of observation wells	100
	Construction of booster wells	100

14. Photos of construction works is given in Annex II

1.3 Project organization and environmental management team.

15. The following organizations and/or staff will be responsible for environmental monitoring

- Basin Irrigation System Authority of Regions
- Contractor of any Subcomponent
- Civil Engineer of Consultant
- Climate Change Mitigation Specialist
- Environmental Expert of Consultant
- Electrical Engineer of Consultant
- Ministry of Health
- Project Manager of Consultant
- Project Implementation Unit
- Water Consumer Associations

16. The key staff for the environmental management and monitoring activities Mrs. Shakhlo Naimova is the PIU's Monitoring and Evaluation Specialist (M&ES). Mrs. Naimova has all responsibilities and tasks related to environment, land, social (including involuntary resettlement and indigenous people), and poverty and gender aspects in accordance with the environment and social safeguard documents and Summary Poverty Reduction and Social Strategy, all of which are project linked documents. Specifically, PIU Monitoring and Evaluation Specialist:

- takes responsibility for monitoring and evaluating performance targets and indicators with baselines indicated in the Design and Monitoring Framework of the project document for all dimensions with support from the implementation consultant;

- provides necessary guidance to the Poverty, Social and Gender Officer in the PIU of Bukhara to collect relevant information on poverty, gender, and social aspects in relation to the Design and Monitoring Framework of the project document and Summary Poverty Reduction and Social Strategy;
17. Additionally, in relation to the environmental aspects, with the support from the international consultant the environmental specialist will:
- ensure that Environmental Management Plan (EMP) is updated during detailed design completed,
 - ensure that bidding documents include all requirement to implement IEE and its EMP;
 - ensure that the bidder selected will have adequate resources to implement and update EMP;
 - undertake safeguards monitoring activities and prepare safeguard reports to be submitted to ADB;
 - ensure that all construction works will be taken place in the permanent land possession of ABISA;
 - if additional land required for construction works, ensure that land acquisition and resettlement plan is prepared in accordance to ADB SPS 2009 as well as the Government law and regulation related with land acquisition; and
 - ensure that other project-related tasks are complied with ADB SPS 2009 and Government requirement
18. PIU as responsible IA for the project recruited a Supervision Consultant (SC) – consortium: «Temelsu International Engineering Services Inc» and «Sheladia Associates Inc.». The International environmental expert (Saban Cimen) and national environmental specialist of Supervision Consultant (EEC) – Jakhongir Gadaev assist M&ES of PIU in the supervision of the construction activities under the Project.
19. The part of the work of the Environmental Experts of the Consultant is to develop a capacity building training program for Contractor's Environmental Officers in order to increase the implementation efficiency of environmental monitoring. The timing of this program will be just before the commencement of civil works. Environmental Experts of the Consultant will develop the content of training.
20. Site Environmental Management Plans have been submitted by all Contractors and they have been reviewed/provided with comments/approved.
21. As it was mentioned above, three Contractors were assigned for the Project; Modernization and Rehabilitation of Amu Bukhara Main Canal Regulating Structures (ABISRP 02), Modernization and Rehabilitation of Kuyu Mazar and Kizil Tepa Pump Stations (ABISRP 03) (Lot 1 and Lot 2) and Rehabilitation of inter-farm and on-farm pilot irrigation network (ABISRP 04) contracts. The Amu Bukhara Main Canal Regulating Structures (ABISRP 02) and Rehabilitation of inter-farm and on-farm pilot irrigation network (ABISRP 04) Contractor's have hired the same person as the Environmental Officers. His name is Izomov Amin Ashurovic. The Contractor of Modernization and Rehabilitation of Kuyu Mazar and Kizil Tepa Pump Stations have not declared the Environmental Officers at SEMP yet.
22. Environmental performance evaluation of overall project progress till the end of reporting period has been performed in conforming with the checklist provided in IEE and attached at Annex I of this monitoring report. The achievements and failures in has been evaluated by the National and International Environmental Experts of the Supervision Consultant.
23. Field supervision has been realized montly or unexpectedly by (EEC) – Jakhongir Gadaev and Bekhram Safarov (PIU SE). Besides daily regular monitoring of environmental activites have been performed by the Site Inspection Engineers of Supervision Consultant. The overall evaluation of these monitoring activities for all contractors have been provided at the Annex I.

24. Meetings and discussions might be required during the implementation phase with Contractor's Environmental Officer and/or Safety Officer, with the other technical members of Technical Assistance Team of PIU.
25. Organisational diagram of the agencies Involved in Project Implementation is shown in the Figure 3.

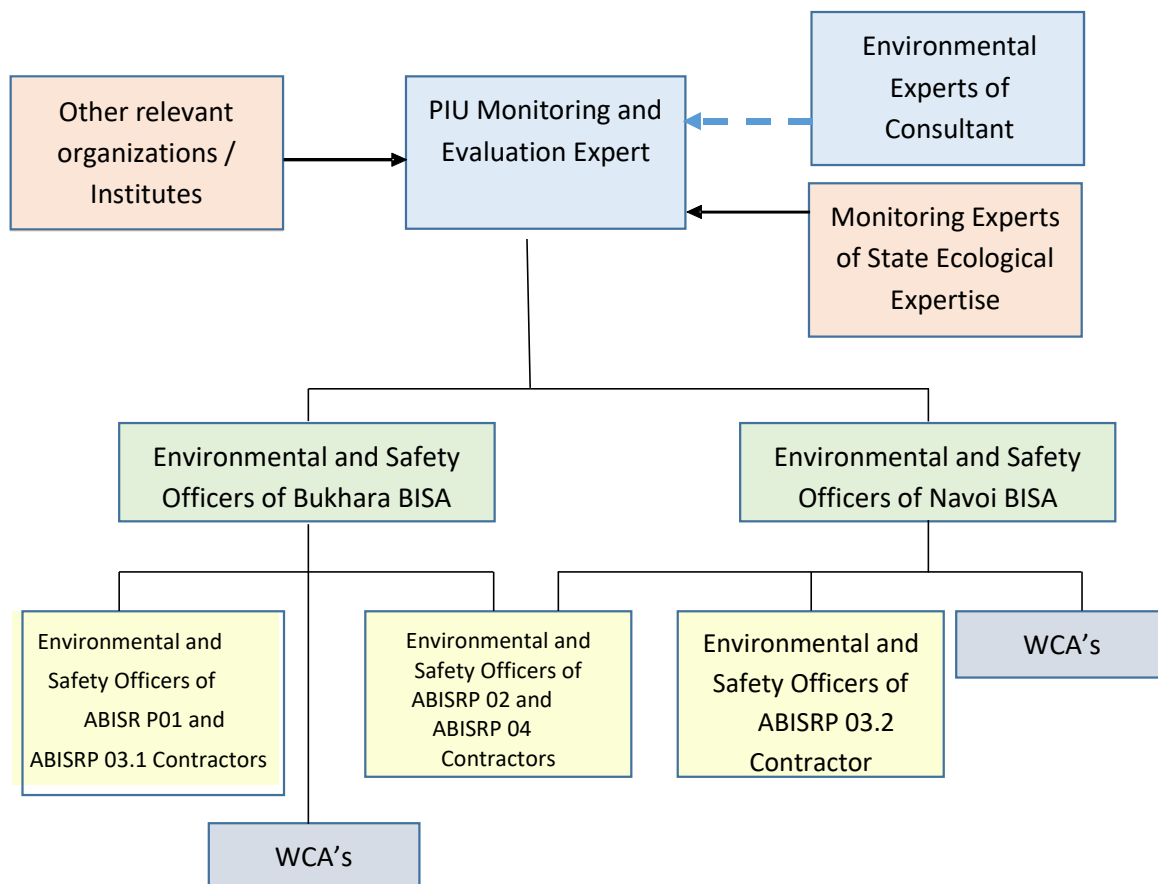


Figure 3. Organisational Diagram of the Agencies Involved in Project Implementation

1.4 Relationships with contractors, owner, lender, etc.

26. The Ministry of Agriculture and Water Resources (MAWR) is the national institution responsible for irrigation and drainage with offices at central, provincial (12) and district level. Since 2003, water management is based on natural irrigation boundaries with the formation of basin authorities, Basin Irrigation System Administration (BISA). BISAs are contained within the MAWR structure as semi-autonomous organizations. There are 10 BISAs and each BISA is further subdivided into (i) canal Administration which looks after the canal systems, and (ii) irrigation system administration (ISA) that look after the irrigated areas. The subproject is situated in the Amu-Bukhara BISA.
27. The main institutions that are involved in IEEs/EMPs/SSEMPs implementation and monitoring, are the executing agency (EA) - MAWR, PIU, BISA, ISA, HGME, Uzhydromet, the Consultant, the Contractors, local branches of State Committee of Nature Protection and Municipal Authorities. EA represented by PIU and the Consultant are responsible for ensuring monitoring of the projects implementation at the construction stage. State Committee of Nature Protection has the authority for periodic audits but should not be considered as a party responsible for monitoring.
28. The overall responsibility for the completion of the work and direction of the contractor to meet the EMMP requirements will be the responsibility of the Construction Engineer (of the Project Management Consultants) supported by the Monitoring Engineer (of the PIU).

They will be supported by the SO. The contractor has his own representative on site – the Site Engineer (SE) who is responsible for implementing the contract and complying with the EMMP.

Part II - Environmental Monitoring

29. The Environmental Monitoring study has been based upon the collection of existing background environmental data from the relevant government authorities. The requested information is given in below Table 3. Until the end of reporting period, the monitoring data has not been received from the relevant government agencies. The environmental monitoring data has been re-requested from the relevant government authorities for the next reporting period.

Table 3: Existing Background Environmental Data

Indicator	Data source	Frequency	Responsibility	Reporting
Quality of irrigation water (pH, salinity, hardness, BOD, COD, nitrate, nitrite, ammonium, phosphate, pesticides, oil products, phenol)	Measurement	Project area, twice a year	PIU, HGMEs, Uzhydromet	Bi-Annual EMR
Soil quality/pollution (SOM (humus), soil carbon, mobile and gross NPK, nitrates, nitrites, ammonium, phosphate, pesticides).	Measurement	Project area, twice a year	PIU, BISA, HGMEs, and WCAs	Bi-Annual EMR

30. Environmental impact monitoring and mitigation was partly carried out in accordance with the updated EMPs and Site Environmental Management Plans (SEMPs) prepared by the Contractors.
31. According to EMP requirements, Contractor is responsible for conduction visual monitoring of above indicated parameters. There are no more requirements on environmental monitoring included in EMP and as following in SEMP. Monthly Progress Reports submitted by the contractors doesn't include any part about the environmental activities. The Contractors have been reformed to integrate the environmental activities in to Monthly Progress Reports. According to the environmental monitoring activities conducted no air, water and other forms of pollution have been observed in the construction sites.
32. During the reporting period no complaints were received from people living in nearby residential areas for any construction site. In case of receiving such complains, further elaboration in environmental monitoring activities and solving and or settling the the proplematic issues needed.

2.1 Air Emissions and Ambient Air Quality

33. Appropriate measures were taken to prevent the pollution of atmospheric air, to limit the dust level from working vehicles and enforce strict observance of safety rules at main road crossing, along main roads, the mahalla streets and near sub-project construction sites.
34. While excavation and transportation of excavating materials, additional environmental requirements were followed: Schedule transportation activities by avoiding peak traffic periods; Use tarpaulins to cover loose material that is transported to and from the site by truck.
35. Inspection of exhaust emissions of vehicles and machinery used has been controlled in Uzbekistan with a regulation named "Implementation of Mandatory Technical Inspection

of Vehicles the Machinery” and numbered 54 which is in force since January 31st, 2003. Each Contractor should hold a valid permission for the vehicles and machineries used in the construction activities. Therefore the vehicles and machineries used in construction activities do not exceed limits as far as they hold a valid permission from relevant Government authorities.

2.2 Wastewater and Ambient Water Quality

36. The toilet facilities for Contract ABISRP 02 in the site camping area are poor in conditions and hasn't been stored in hygienic conditions or disposed after treatment or transferred to a treatment facility. The domestic sewage effluent hasn't been observed in the construction site. This might be due to few number of working staff and undoubtedly the filtration to groundwater. It should be reported that no ground water usage either for drinking or irrigational purposes has been observed in the nearby vicinity of working sites.
37. Canal cleaning involved excavation of large amounts of sediment. This was disposed of to locations agreed with the Engineer. Where there was insufficient space along the side of the canal embankment to deposit the excavated materials, they were transported and deposited in disposal areas further away from the canal.
38. During the canal cleaning works it is unavoidable to form temporary turbidity and sediment problems. In reality the existing water quality of the irrigation water turbid and high in sediment amount, therefore this temporary effect could not be differentiated, unless the sediment amount is measured before and during the cleaning activity.

2.3 Hazardous Waste Management

39. The Contractor of Amu Bukhara Main Canal Regulating Structures (ABISRP 02) and Contractor of Rehabilitation of inter-farm and on-farm pilot irrigation network (ABISRP 04) have not a separate hazardous waste collection area. Since the maintenance and repairment of machinery and vehicles are outsourced.
40. The old tyres and consumed accumulators directly transferred for final disposal without any record.
41. Contractors pay no attention to the storage of oil in nearby water courses which needs corrective actions to be taken by the Contractors. No sign or signboards exist for fuel storage areas.

2.4 Waste Management

42. The solid waste has not been separated in the working site. All kind of solid waste has been stored and transferred to the Municipal Solid Waste Disposal areas by means of municipal solid waste collection vehicles within the service area of Municipality or in any other case by means of Contractors tractors.
43. Sediments cleaned from the canals have been stored in controlled stock piles. After the works are completed, if the quality of dredged or excavated material is good for construction and/or agricultural purposes they have been reused. In any other case, they have been transferred to the site defined by the local competent authorities.

2.5 Noise

44. To limit the dust at the construction sites, adjacent to the sites area being watered in a due time.
45. The chief of a site of the Contractor - provided conformity of EMP, visually inspected safe use of the equipment, noise level of vehicles and mechanisms.

2.6 Land Contamination

46. Except small spillages of oil from the machinery used no any big land contamination has been recorded. In case of small land contamination, the sand has been laid on top of contaminated soil for further spread out. Then contaminated soil and sand has been transported to the municipal solid waste disposal site.

2.7 Flora and Fauna

47. The impact on flora and fauna in the project area is minimal. Construction works were monitored and controlled in accordance with the EMP.

2.8 Occupational Health and Safety

48. Occupational Health and Safety training which includes Emergency Preparedness and Response has been given to the working staff.
49. According to Amu Bukhara Main Canal Regulating Structure (ABISRP-02) and Rehabilitation of inter-farm and on-farm pilot irrigation network (ABISRP 04) Contractors, workers are local and living in the neighboring area, and there was no construction camp available. On some sites workers have temporary trailers for storage of their personal things and drying their clothes. There is no canteen in sites since the workers are local citizens and have lunch at home.
50. Surfaces and facilities in site camps of the Contractors are not clean and kept in hygienic conditions. Facilities are not safe adequately and don't provide protection against climatological conditions, don't have acceptable light conditions.
51. Site camps of the Contractors don't have any fire-fighting equipment or fire extinguisher.
52. Potable water exists in the construction site and site camps.
53. In the working site of the Contractors Personal Protective Equipmet (PPE) has been provided to the staff. However, working staff shuffles for using PPE provided.
54. All construction sites have first-aid kit available for workers and there are regular trainings on H&S conducted by Engineers.

2.9 Traffic Safety

55. The Contractors prefers to use flag persons to warn drivers about the dangerous conditions. The Contractors have been advised to use road signs and safety instructions and reflective tapes for safety strips.

Part III - Environmental Management

3.1 The status of IEE/EMP and SEMP

56. The Initial Environmental Examination Report (IEE) has been reviewed, revised and updated by the Environmental Experts of the Supervision Consultant. In following a brief information is given:
57. In general, the prepared IEE has been regarded as a comprehensive document, which explains the project activities as required and gives clear identification of the prevailing environmental conditions. The IEE explains the projects impacts on the environment and proposes the necessary mitigation measures to overcome project. On base of this and previous assessment IEE categorizes ABISR is "Category B" according to OM Section F1/OP of ADB. The project impacts on environment is lead it to be considered as Category III Project according to the national requirements. Also, comparison of project alternatives has been carried out within IEE.
58. The IEE provides an Environmental Management Plan (EMP) as an appendix, which clearly gives the activities related potential environmental impacts for each phase of the project, e.g. pre-construction, construction and operation and maintenance phases.
59. The EMP identifies also implementing and monitoring responsibilities, parameters to be monitored, frequencies and costs. However, it does not clearly give the cost amounts since they are associated with either construction activities or consultant activities.
60. The IEE has been translated into Russian in 2013 and send tot NPC for approval. The approval of IEE has been obtained for the IEE on 23rd January 2013. The IEE has been published ADB's website on May 2013.
61. As more than 3 years have passed over this approval, according to the national requirements IEE had to be renewed and sent to NPC for approval.
62. Based on this requirement, Environmental Experts of the Consultant have already updated both English and Russian versions of IEE. The Russian Version of the updated IEE was sent to the NPC for renewal of approval. During this approval process, comments received from NPC and reflected to the English version. The approval for the updated IEE has been obtained on October 13, 2016., the English Version of IEE was sent to ADB for issuing in the website.
63. The Consultant has integrated the Environmental Management Plan and its requirements to the Bidding Documents like preparation of SEMP plans, designation of staff responsible for environmental monitoring activities, etc.
64. The Site Environmental Management Plans have been submitted by all Contractors and they have been reviewed/provided with comments/approved. The submission dates of SEMP's have been given below:

Amu Bukhara Main Canal Regulating Structure (ABISRP 02)

1st Submission November 28th, 2016

2nd Submission December 6th, 2016

Modernization and Rehabilitation of Kuyu Mazar and Kizil Tepa Pump Stations (ABISRP 03)

Lot 1: Rehabilitation and Modernization of Kuyu Mazar Pumping Station

1st Submission December 19th, 2017

Lot 2: Rehabilitation and Modernization of Kizil Tepa Pumping Station

1st Submission December 19th, 2017

1st Submission November 28th, 2016

2nd Submission December 6th, 2016

65. The project foresees one more civil works and installation contract with expected commencing date as early and middle of 2018. Preparation of the SSEMP is anticipated under the project. The SSEMP is expected to comprise a clear statement of environmental policy to be adopted for the Contract. As, according to the General Conditions of Contract “The Project Manager shall represent and act for the Employer at all times during the performance of the Contract. All notices, instructions, orders, certificates, approvals, and all other communications under the Contract shall be given by the Project Manager”, the SSEMPs shall be subject to the approval by the Engineer (Project Manager).

3.2 Site inspections and audits

66. Regular site monitoring visits were carried out during the reporting period by PIU, and Environmental Specialist to check up realization of environmental protection measures parallel to civil works inspection as indicated below:

Date of Review Mission	Conducted by
July 2017	Bekhram Safarov (PIU SE)
August 2017	Bekhram Safarov (PIU SE)
September 2017	Bekhram Safarov (PIU SE)
October 2017	Bekhram Safarov (PIU SE)
November 2017	Bekhram Safarov (PIU SE)
December 2017	Bekhram Safarov (PIU SE)

67. Contractors regularly provide the progress on EMP implementation in their Quarterly Progress Reports on Environmental Monitoring. According to the SEMP of the contractors the environmental monitoring activities should be reported in monthly progress reports as the Contractors are re-informed.
68. In order to comply with national legislation, a EIA documents were developed for each demonstration site (Dilnoz Ugli Abdukhalil, Vafo and Yomgir farms), to which the state ecological expertise of the Bukhara Regional Committee for Nature Protection was issued. Scanned state ecological expertise conclusions of 3 demonstration pilot sides is given at the Report of Reporting period of January – June 2017.
69. The Contractors have official agreements with the local communal services on removal of construction and domestic wastes to the municipal landfill. Depending on the stage of construction/rehabilitation and remoteness of construction site from closest community, removal could be done once per week or 10 days.
70. On some sites residential facilities are located in the immediate closeness of construction works implementation area. According to the Contractors and PCU Regional Coordinator, there were no any complaints from the local citizens regarding the noise from construction site. In fact, there are no any residential area nearby the construction sites.

3.3 Non-compliance notices and corrective action plan

71. During the reporting period (July 1st -December 31st, 2017) the observed non-compliance issues have been given below related to the construction activities of Amu Bukhara Main Canal Regulating Structure (ABISRP 02) and Rehabilitation of Inter-farm and On-farm Pilot Irrigation Network (ABISRP 04) Contracts.

Non-Compliances	Corrective measures	Implementation deadline
ABISRP – 02 and ABISRP-04		
P.36 - The toilet facilities for Contract ABISRP 02 in the site camping area are poor in conditions and hasn't been stored in hygienic conditions or disposed after treatment or transferred to a treatment facility. The domestic sewage effluent hasn't been observed in the construction site.	The Contractor of ABISRP 02 has been informed to comply with the national legislation and contract requirements.	31 March 2018
P.39 - The Contractor of Amu Bukhara Main Canal Regulating Structures (ABISRP 02) and Contractor of Rehabilitation of inter-farm and on-farm pilot irrigation network (ABISRP 04) have not a separate hazardous waste collection area. Since the maintenance and repairing of machinery and vehicles are outsourced.	Since the maintenance and repairing of machinery and vehicles are outsourced. No need for corrective actions.	
P. 40 - The old tires and consumed accumulators directly transferred for final disposal without any record.	The contractor has been informed provide the necessary data.	01 March 2018
P.41 - Contractors pay no attention to the storage of oil in nearby water courses which needs corrective actions to be taken by the Contractors. No sign or signboards exist for fuel storage areas.	The Contractor of ABISRP 02 has been informed to comply with the national legislation and contract requirements.	01 March 2018
P. 42 - The solid waste has not been separated in the working site. All kind of solid waste has been stored and transferred to the Municipal Solid Waste Disposal areas by means of municipal solid waste collection vehicles within the service area of Municipality or in any other case by means of Contractors tractors.	The contractor has been informed to sort solid waste separately.	12 February 2018
P. 46 - Except small spillages of oil from the machinery used no any big land contamination has been recorded. In case of small land contamination, the sand has been laid on top of contaminated soil for further spread out. Then	After discussions with the Contractor since there is not any other applicable solution. The solution is accepted as a reasonable solution.	N/A

contaminated soil and sand has been transported to the municipal solid waste disposal site.		
P.50 - Surfaces and facilities in site camps of the Contractors are not clean and kept in hygienic conditions. Facilities are not safe adequately and don't provide protection against climatological conditions, don't have acceptable light conditions.	The Contractor of ABISRP 02 has been informed to comply with contract requirements.	12 February 2018
P. 51 - Site camps of the Contractors don't have any fire-fighting equipment or fire extinguisher.	The Contractor of ABISRP 02 has been informed to comply with contract requirements.	12 February 2018

72. On 26 November ADB mission has visited the site and prepared Mission Notes. Some non-compliances revealed during the ADB mission and indicate implementation statuses of corrective actions are given below:

Non-Compliances	Corrective measures	Implementation deadline
ABISRP – 03		
Construction Contractor has two international environmental specialists on site and should hire national environmental expert	The Contractor shall hire national environmental expert.	1 March 2018
CC should prepare two SSEMPs for Kuyu Mazar and Kizil Tepa Pump Stations before commencement of construction activities by the end of December 2017 and send for SC endorsement and PIU's approval. During the mission RETA 8663 Regional Environmental Consultant delivered training related to preparation of SSEMP and provided samples	CC contractor Should provide revised SSEMP for Kuyu Mazar and Kizil Tepa Pump Stations. (19 th December, 2017)	20 December 2017
CC was also requested to establish environmental recording system and keep separate folder for environmental documents at camp site. The list of necessary environment documents have been shared with CC by RETA 8663 Regional Environmental Consultant including samples of weekly environmental checklists for inspections and monitoring.	The Contractor has been informed to have an environmental recording system.	31 December 2017
Grievance Redress Mechanism is under establishment on the site level. Training on GRM requirements was conducted for CC and SC team, the grievance log book sample was provided.	The contractor has been informed about providing GRM system and logbooks to be available at the camp site.	Before commencement of construction works
ABISRP – 03		
Due to completion of works SC should conduct post-construction environmental audit, fill up the checklist and prepare Post-	SC's environmental specialist to conduct Post-construction environmental audit and prepare Post-Construction Environmental	31 December 2017

Non-Compliances	Corrective measures	Implementation deadline
Construction Environmental Audit Report by the end of December 2017. During the mission RETA 8663 Regional Environmental Consultant provided orientation training how to conduct post-construction environmental audit and provided checklists/samples.	Audit Report by the end of December 2017 under ABISRP 04	

3.4 Consultation and complains

73. Construction works have been implemented in permanent interaction with local administrative units – mahallas. Prior to starting construction activities heads of mahallas were informed about planning activities. During project implementation, communication between Contractors and PIU staff have been kept as well.
74. Consultations and explanation meetings on minimization of environmental degradation and observance of the Regulation of the State Committee for Nature Protection took place during the project implementation period.
75. The PIU environmental officer coordinates with local authorities, mahalla, and committee on nature protection to resolve any complaint within 5 working days by identifying how the solution is implemented and communicating with the complainants. If within 5 working days, complaint cannot be resolved, complainants have the right to bring the complaint to high authorities, such as Hokim, or Ministry of Agriculture by following the Government Resolution on Civil Right. All complaints received and handled will be recorded in systematic manner and both resolved or unresolved have to be directly reported to ADB.
76. No complaint has been received by the GRM during the reporting period (July 1st - December 31st, 2017).

Part IV - Action plan for the next period

77. The Contract of Rehabilitation of Inter-farm and On-farm Pilot Irrigation Network (ABISRP 04) have been completed on October 21st, 2017. During the next reporting period the construction activities of Amu Bukhara Main Canal Regulating Structure (ABISRP 02) will be intensified. Since the field works of this contract has been in extensive area a continuous and intensive environmental monitoring activity is needed. The training of Environmental Management Officer of the Contractor is necessary for responsibilities about the monitoring and reporting. The training program should be in the January 2018. The Monthly Progress Reports of the Contractor is expected to include Environmental Monitoring activities.
78. An increase in the physical activities of Modernization and Rehabilitation of Kuyu Mazar and Kizil Tepa Pump Stations (ABISRP 03) is expected. As known Modernization and Rehabilitation of Kuyu Mazar and Kizil Tepa Pump Stations (ABISRP 03) has been divided into two lots first one is Rehabilitation and Modernization of Kuyu Mazar Pumping Station and second one is Rehabilitation and Modernization of Kizil Tepa Pumping Station. The Contractors of the both lots are the same firm. Prior to starting the construction activities, Environmental Management Officer of the Contractor will be trained about the environmental monitoring requirements and responsibilities. The training program should be in the January 2018. The SEMP's of the Contractor for both site is expected to be reissued and fit into the requirements of the project. SSEMPs shall be finalized until the end of February.
79. Until now baseline information of the project couldn't be obtained from the authorities through PIU. The baseline information was requested on October 8th, 2015. The overall project performance evaluation depends upon to this baseline information. Therefore, it is necessary to collect the baseline information related to the project area. The baseline information will be re-requested from PIU to be obtained from the authorities. The requisition letter will be issued until the end of January 2018.
80. Due to completion of works of Contract ABISRP 04 Environmental Expert of the Consultant will conduct post-construction environmental audit, fill up the checklist and prepare Post-Construction Environmental Audit Report by the end of February 2018.

**ANNEX I PERFORMANCE EVALUATION OF ENVIRONMENTAL MONITORING OF
ABISRP**

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
PRE-CONSTRUCTION PHASE						Lot 1	Lot 2	
Has the Consultant reviewed IEE?	By the activities of PIU Technical Assistance Team	Once in the initial phase of project.	EEC	Y	N/A	N/A	N/A	N/A
If the IEE has been updated has it been send to the ADB for approval?	By the activities of PIU Technical Assistance Team	Once in the initial phase of project.	EEC	Y	N/A	N/A	N/A	N/A
Has the PIU submitted IEE assessment report for approval to the National Authorities?	By the activities of PIU Technical Assistance Team	Once in the initial phase of project.	PIU	Y	N/A	N/A	N/A	N/A
Has the Consultant included the EMP as a special Condition in the Bid Document?	By the activities of PIU Technical Assistance Team	Once in the initial phase of project.	PEC	Y	N/A	N/A	N/A	N/A
Has the Contractor designed adequate staff facilities in the pump house redesigns (water-seal toilets, furbished rest rooms, dining rooms, etc.)	By technical review	Once in the review of design documents	CEC	N/A	N/A			N/A

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the Contractor's design include raised walking ways?	By technical review	Once in the review of design documents	CEC	N/A	N/A			N/A
Does the Contractor's design provide safety guards on the areas exposed to the machinery?	By technical review	Once in the review of design documents	MEC	N/A	N/A			N/A
Does the Contractor's design have any drainage facility to lower ground water?	By technical review	Once in the review of design documents	CEC	N/A	Y			Y
Does the design meet the internationally acceptable safety standards of electricity for wet working areas?	By technical review	Once in the review of design documents	EIEC	N/A	Y			Y
Does the design consider critical periods for biological life and adhere any avoidance plan?	By technical review	Once in the review of design documents	EEC	N/A	N/A			N/A
Does the Contractor have proper survey equipment?	By technical review	Once in the review of	CEC	N/A	Y			Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
		design documents						
Does the design ensures free access to the facilities and availability of roads to them for O&M?	By technical review	Once in the review of design documents	CEC	N/A	Y			Y
Does the design take care the placement of building and facilities considering fire breaks?	By technical review	Once in the review of design documents	MEC	N/A	N/A			N/A
Does the design considers Corrosion protection of buildings by ground water?	By technical review	Once in the review of design documents	CEC	N/A	Y			Y
Does the design care the fire proof materials where necessary?	By technical review	Once in the review of design documents	CEC	N/A	N/A			N/A
Has the Contractor checked the desilting efficiency of inlet canal design and desilting basins?	By technical review	Once in the review of design documents	CEC	N/A	Y			Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the Contractor developed inlet having sand trap and/or other alternative devices?	By technical review	Once in the review of design documents	CEC/MEC	N/A	Y			Y
Does the design consider oil separators to have oil concentration less than 0.3 mg/l?	By technical review	Once in the review of design documents	CEC/MEC	N/A	N/A			N/A
Does the Contractor developed a Worker Safety Plan in compliance with Uzbekistan Labor Code?	By technical review	Once in the review of design documents	EEC	N/A	Y			Y
Does the design consider protection measures for pipes laid in saline areas ?	By technical review	Once in the review of design documents	MEC	N/A	N/A			N/A
Does the design consider safety conditions of crossing, bridges that will be used for transportation of vehicles, equipment and staff?	By technical review	Once in the review of design documents	CEC	N/A	Y			Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the design consider landscaping convenient to the prevailing natural conditions?	By technical review	Once in the review of design documents	EEC	N/A	Y			Y
Does the design consider training of O&M staff on mechanical and electrical equipment?	By technical review	Once in the review of design documents	EIEC	N/A	N/A			Y
Does the design consider to supply transformers free of PCB?	By technical review	Once in the review of design documents	EIEC	N/A	N/A			N/A
Is the EMP attached to the Contract to form a part of Contract Documents?	By technical review	Once in the review of design documents	PEC	Y	Y	Y	Y	Y
Does the design consider the irrigational and drinking water requirements?	By technical review	Once in the review of design documents	MEC	N/A	Y			Y
Has PIU evaluated the bidder by checking EMP requirements?	By technical review	Once in the review of	PEC	N/A	Y			Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
		design documents						
Has the Contractor prepared an acceptable EMP based on the Approved IEE?	By technical review	Once in the review of design documents	CEC	Y	Y			Y
Has the Contractor developed Contingency Plan for accidents including spill of fuel?	By technical review	Once in the review of design documents	EEC	N/A	Y			Y
Has the Contractor submitted the Site Environmental Management Plan?	By technical review	Once in the review of design documents	EEC	N/A	Y			Y
Does the Contractor published a public notice regarding the nature and location of the project?	Questionaries	Once in the initial phase of construction project.	C	N/A	N			N

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the Consultant conducted training program for WCA?	By the activities of PIU Technical Assistance Team	Once according to the time schedule of the training program	EEC	Y	N/A			N/A
Has the Consultant conducted training program for BISA?	By the activities of PIU Technical Assistance Team	Once according to the time schedule of the training program	EEC/MEC	N	N/A			N/A
Has the EMP been explained to the Contractor before the commencement of works?	By the activities of PIU Technical Assistance Team	Once before the commencement of construction project.	PMC/EEC/PIU	N/A	Y			Y
Has the Contractor defined Environmental Management Officer?	Bidding Documents	Once in bid evaluation phase	C	N/A	Y	N	N	Y
Has the Contractor defined Safety Officer?	Bidding Documents	Once in bid evaluation phase	C	N/A	N	N	N	N

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the Contractor handle the protected plant species, trees taking care of environmental concerns and/or permissions?	Questionaries	monthly	C	N/A	Y			Y
Does the Contractor excavate and preserve the top soil?	Questionaries	monthly	C	N/A	N			N
Does the Contractor maximize the use of excavated material for construction works?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor defined the licensed or got permissions borrow area for usage of construction material?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor caused any landslide or erosion?	Questionaries	monthly	C	N/A	N			N
Has the Contrator stockpiles of excavated material for backfilling?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor realized the work activities during non-cropping periods?	Questionaries	monthly	C	N/A	Y	N/A	N/A	Y
Has the Contractor take measures for providing water continuously during construction work?	Questionaries	monthly	C	N/A	Y	N/A	N/A	Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the Contractor defined spoil disposal site with the local authorities?	Questionaries	monthly	C	N/A	Y			Y
Does the Contractor disposed/recycled the waste material from the construction area?	Questionaries	monthly	C	N/A	Y			Y
Has PCB containing electirical equipment disposed according to the requirements of Gozecoexpertisa?	Questionaries	monthly	C	N/A	N/A			N/A
Has the Contractor defined material storage area?	Questionaries	monthly	C	N/A	N			N
Has the Contractor defined fuel storage area 20 m away from water course?	Questionaries	monthly	C	N/A	N			N
Is the noise level in working area below the defined limit 80 dB(A)?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor taken noise prevention measures for staff using noisy equipment, vehicles?	Questionaries	monthly	C	N/A	N			N
Is the nearest residential area affected by the noise level?	Questionaries	monthly	C	N/A	N			N
Has the working activities limited by daylight hours?	Questionaries	monthly	C	N/A	Y			Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the Contractor have a water tanker for spraying water to roads?	Questionaries	monthly	C	N/A	Y			Y
Does the Contractor suppress the dust by watering?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor trained the staff on personnel health and sanitation procedures at the working camp, how to interact with the host communities, subprojects environmental protection measures?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor trained the staff on contingency plan?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor trained the personnel for fuel handling procedure?	Questionaries	monthly	C	N/A	Y			Y
Does the Contractor trained any person for the first-aid?	Questionaries	monthly	C	N/A	N			N
Does the Contractor apply any simple training measure for the visitors?	Questionaries	monthly	C	N/A	N			N
Does the Contractor keep the records for all kind of training?	Questionaries	monthly	C	N/A	Y			Y

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Number of accidents occurred during report period?	Questionaries	monthly	C	N/A	0			0
Does the Contractor supply clean drinking water to the staff?	Questionaries	monthly	C	N/A	Y			Y
Does the Contractor provide the staff hygienic living and working conditions?	Questionaries	monthly	C	N/A	N			N
Does the Contractor have toilets, baths, sleeping quarter, dining hall for the staff?	Questionaries	monthly	C	N/A	Y			Y
Does the Contractor have any social facilities like sporting area, canteen, shuttle vehicles to the local centers, etc.?	Questionaries	monthly	C	N/A	N			N
Does the Contractor check the health of the staff regularly?	Questionaries	monthly	C	N/A	N			N
Does the Contractor keep the health record of the staff?	Questionaries	monthly	C	N/A	N			N
Does the Contractor have adequate fire protection measures?	Questionaries	monthly	C	N/A	N			N
Has the Contractor made available the first aid kit to the staff?	Questionaries	monthly	C	N/A	N			N

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the Contractor provided safe floor and hand rails, stairs, lifts where necessary?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor provided the enough ventilation and lightening in the specific areas?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor provided the safety equipment, material to the staff?	Questionaries	monthly	C	N/A	Y			Y
Does security staff exist in the working area?	Questionaries	monthly	C	N/A	Y			Y
Does the working area have fencing in order to protect intrusion?	Questionaries	monthly	C	N/A	N			N
Has the Contractor defined solid waste storage area?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor defined the area for used material storage?	Questionaries	monthly	C	N/A	N			N
Does the Contractor apply solid waste separation for recyclable solid waste?	Questionaries	monthly	C	N/A	N			N
Does the Contractor keeps any record for the waste recycled?	Questionaries	monthly	C	N/A	N			N

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the Contractor keep any record for the solid waste disposed?	Questionaries	monthly	C	N/A	N			N
Does the Contractor keep any record for the hazardous waste disposed?	Questionaries	monthly	C	N/A	N			N
Does the Contractor use the local public roads even the avoidance from these road(s) possible?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor collected and disposed the solid waste regularly?	Questionaries	monthly	C	N/A	Y			Y
Does the Contractor discharge the sewerage after treatment?	Questionaries	monthly	C	N/A	N			N
Does the Contractor avoid the peak hours of local traffic in case of use of local public roads?	Questionaries	monthly	C	N/A	Y			Y
Does the material carried on public roads covered?	Questionaries	monthly	C	N/A	Y			Y
Does the Contractor use the vehicles having the controlled exhaust emissions?	Questionaries	monthly	C	N/A	N			N
Does the Roads selected by the Contractor effect the protected areas?	Questionaries	monthly	C	N/A	N			N

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Does the public informed with adequate signs about the working area and vehicles?	Questionaries	monthly	C	N/A	N			N
Do the Vehicles of the Contractor fit in to the speed limits?	Questionaries	monthly	C	N/A	Y			Y
Does the Contractor repair all infrastructure/roads when damage given by them?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor removed the soil if they contaminated?	Questionaries	monthly	C	N/A	Y			Y
Has the Contractor left the working area as defined in Landscape section of the Bidding Documents?	Questionaries	monthly	C	N/A	Y			Y
Has the Operating Personnel signed and accepted all work sites, labor camps, storage areas and temporary dumping areas?	Questionaries	monthly	C	N/A	N			N
Number of grievances about the Contractor?	Interview with the relevant authorities	monthly	BISA	N/A	0			0

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Number of grievances solved by the Contractor?	Interview with the relevant authorities	monthly	BISA	N/A	0			0
Has the Contractor provided the training on the safe use of electricity and pumps for operational staff?	Questionaries	Once when the project activities completed	EEC	N/A	N/A			N/A
Has the Contractor evalauted the trained O&M staff?	Questionaries	Once when the project activities completed	MEC/EIEC	N/A	N/A			N/A
Has the Consultant trained the WCA, BISA staff for irrigation canal and drainage canal management?	Questionaries	Once when the project activities completed	EEC	Y	N/A			N/A
Has the Consultant evalauted the trained WCA, BISA staff?	Questionaries	Once when the project activities completed	EEC	Y	N/A			N/A
Has the Oil Separator regularly checked and properly maintained?	Questionaries	Once when the project activities completed	EEC	N/A	N/A			N/A

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Has the relevant organisations observed the irrigation water quality?	Questionaries	Once when the project activities completed	EEC	N	N/A	N/A	N/A	N/A
Has the relevant organisations observed the ground water level in the irrigation area?	Questionaries	Once when the project activities completed	EEC	N	N/A	N/A	N/A	N/A
Have the farmers applied crop rotation?	Questionaries	Once when the project activities completed	BISA	N	N/A	N/A	N/A	N/A
Have the farmers applied environmentally friendly agricultural production techniques?	Questionaries	Once when the project activities completed	BISA	N	N/A	N/A	N/A	N/A
Has the fertility and productivity been enhanced?	Questionaries	Once when the project activities completed	BISA	N	N/A	N/A	N/A	N/A
Has the O&M staff applies the national Worker Safety Plan?	Questionaries	Once when the project	C	N/A	N			N

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
		activities completed						
Has the Contractor made facilities available in the operational building with the clean drinking water?	Questionaries	Once when the project activities completed	C	N/A	Y			Y
Has the Contractor made facilities available in the operational building with sewerage disposal/handling?	Questionaries	Once when the project activities completed	C	N/A	N			N
Has the international agreements about the water abstraction been fitted?	Questionaries	Once when the project activities completed	EEC		N/A	N/A	N/A	N/A
GENERAL ENVIRONMENTAL IMPACTS OF THE PROJECT ON THE ENVIRONMENT								
Flow amount of water in channels?	Measurement	Monthly	BISA/WCA	N	N/A	N/A	N/A	N/A
Irrigated Area (ha)	Measurement	Monthly	BISA/WCA	N	N/A	N/A	N/A	N/A
Amount of water used for irrigation purposes.	Measurement	Monthly	BISA/WCA	N	N/A	N/A	N/A	N/A

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Water quality of irrigation water (pH, salinity, hardness, BOD, COD, Nitrate, Nitrite, Ammonium, Phosphate, Pesticides, Oil products, phenol) in the project area.	Measurement	Bi-annual	PIU, HGMEs, Uzhydromet	N	N/A	N/A	N/A	N/A
Soil quality/pollution (SOM) (humus), soil carbon, mobile and gross NPK, nitrates, nitrites, ammonium, phosphate, pesticides)	Measurement	Bi-annual	PIU, BISA, HGMEs, and WCAs	N	N/A	N/A	N/A	N/A
Water levels of wells in the irrigated areas? (specify wells)	Measurement	Monthly	BISA/WCA	N	N/A	N/A	N/A	N/A
Amount of water used for irrigation purposes.	Health Statistics of Local Authorities	Yearly	PIU from local MoH	N	N/A	N/A	N/A	N/A
Electricity Consumed before the project by pumping?	Electricity Meter Records	Monthly Consumed, yearly total	BISA	N	N/A	N/A	N/A	N/A
Electricity Consumed after the project by pumping?	Electricity Meter Records	Monthly Consumed, yearly total	BISA	N	N/A	N/A	N/A	N/A

INDICATORS	Data Source	Frequency	Responsibility	Achievement From Commencement of Project Till end of Reporting Period (Yes(Y)/No(N)/Not Aplicable(N/A))				
	How it will be measured?	How often it will be measured?	Who will measure it?	General	ABISRP 02	ABISRP 03		ABISRP 04
Water quantity pumped before rehabilitation/reconstruction?	Flow Measurement	Monthly, average flow	BISA	N	N/A	N/A	N/A	N/A
Water quantity pumped after rehabilitation/reconstruction?	Flow Measurement	Monthly, average flow	BISA	N	N/A	N/A	N/A	N/A
Reduction in % of GHG by implementation of project?*	Calculations	Once based on yearly energy consumption amounts	Calculated by PIU CCMS		N/A	N/A	N/A	N/A

BISA : Basin Irrigation System Authority of Regions

C: Contractor of any Subcomponent

CEC: Civil Engineer of Consultant

CCMS: Climate Change Mitigation Specialist

EEC: Environmental Expert of Consultant

EIEC: Electrical Engineer of Consultant

EMR: Environmental Monitoring Report

MEC: Mechanical Engineer of Consultant

MoH : Ministry of Health

MRoC: Monthly Report of the Contractor about the Implementation of EMP

PEC: Procurement Expert of Consultant

PMC: Project Manager of Consultant

PIU: Project Implementation Unit

WCA: Water Consumer Associations

ANNEX II- PHOTOS

Excavation (Cleaning) works in USC canal. (August -September 1-31 2017 ABISRP02)

Spill to YSK



Before
Spill to YSK



After

General View of YSK Canal After Work Completed



Before



After

General View of YSK Canal After Work Completed



Rehabilitation of Inter-farm and On-farm Pilot Irrigation Network (ABISRP 04)

Construction of Water Structures at Canal Kukin



Installation water level measuring on Pipe crossing and water outlet at PK 11+12 on Diversion No.3 completed.



Installation water level measuring Water outlet at PK 7+78 completed.



Construction of Water Structures at Canal Utabek



Installation water level measuring Water outlet at PK 45+10 completed



Installation water level measuring on Water outlet at PK 7+05 on Diversion No.3 completed

Construction of Water Structures at Canal Lower Gazobod	
	
Water outlet at PK 5+26 on Diversion No.3 completed	Water outlet at PK 31+80 completed

Modernization & Rehabilitation of Amu Bukhara Main Canal Regulation Structures (ABISRP 02)

Construction Works at Agitma



Construction Progress at Agitma I



Construction Progress at Agitma II

Construction Works at Djilvan



Construction Progress at Djilvan I



Construction Progress at Djilvan II