

# **Project Readiness Financing Environmental Assessment and Review Framework**

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## **Uzbekistan: Horticulture Intensification and Productivity Enhancement Project**

Prepared by ISCAD for the Asian Development Bank

This report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB Board of Directors or staff and may be preliminary in nature.

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## LIST OF ABBREVIATIONS

ADB	– Asian Development Bank
AM	– accountability mechanism
ASO	– Agroservis Operator
CSEE	– Center of State Environmental Examination
EA	– executing agency
EARF	– environmental assessment and review framework
EIA	– environmental impact assessment
EMP	– environmental management plan
EMR	– environmental monitoring report
GRM	– grievance redress mechanism
IA	– implementation agency
IEE	– initial environmental examination
ISC	– implementation support consultant
ISCAD	– International Center for Strategic Development and Research in the Field of Food and Agriculture
LARP	– land acquisition and resettlement plan
MHCS	– Ministry of Housing and Communal Services
MNR	– Ministry of Natural Resources
MOA	– Ministry of Agriculture
OHS	– occupational health and safety
PCB	– polychlorinated biphenyl
PEIS	– preliminary environmental impact statement
PIU	– project implementation unit
PPTA	– project preparatory technical assistance
PRF	– project readiness facility
RD	– ruling document
REA	– rapid environmental assessment (ADB checklist)
RUz	– Republic of Uzbekistan
SanR&N	– sanitary rules and norms
SCEEP	– State Committee on Ecology and Environmental Protection
SEC	– statement on environmental consequences
SEE	– state environmental expertise
SES	– Sanitary and Epidemiological Services
SPS	– Safeguard Policy Statement (2009)
SSEMP	– site specific environmental management plan
TRTA	– transaction technical assistance
WWTP	– waste-water treatment plant

## I. INTRODUCTION

### A. Background

1. While agriculture's share of Uzbekistan's gross domestic product has been in decline, it remains a priority sector given its role in food security. It also provides the main source of employment for 3.4 million people, accounting for almost 17% of the 20.2 million working-aged people in a total national population of 35.8 million.

2. Before 2015, cotton and wheat were the main strategic crops in Uzbekistan, during which time large-scale cotton and wheat farms received state support through preferential access to land, inputs, and finance. From 2017 however, government priorities transitioned from centrally planned cotton and wheat cultivation to higher value horticultural crops grown by private farmers. The ADB and other international development partners subsequently responded by supporting horticulture through seven projects to further accelerate subsector development.<sup>1</sup> Restrictions on horticultural exports were also removed in 2017, resulting in a significant increase in horticultural production. As a result, by 2021, horticulture accounted for 50% of the value of agricultural output, and 35% of the value of agricultural exports. Uzbekistan now ranks among the top global exporters of several horticultural products, including apricots, cherries, and grapes.

3. Agriculture production accounts for an estimated 90% of all water utilized in Uzbekistan, and as a result, climate change and its impact on finite water resources is a key constraint to horticultural expansion. Despite steps towards liberalizing the agriculture sector, the long-term prospect for horticulture is hampered by limited water resources.<sup>2</sup> Water supply for irrigation will become more variable due to climate change impacts. The projected total water demand is expected to increase by at least 10% between 2020 and 2050, while water supply is expected to decrease by 9%. Arable land area has been in steady decline, from 3.78 million hectares (ha) in 2000 to 3.47 million ha in 2017, and 3.26 million ha in 2021. The trend reflects limited water availability due to (i) the reduction of transboundary water resources, (ii) deteriorating irrigation systems, and (iii) soil exhaustion from improper soil management practices. These have resulted in increased areas of abandoned land. In the target districts, the groundwater table has dropped from 20-80 meters below ground level in 2012 to 120-150 meters below ground level in 2022. Diminishing groundwater highlights the need for water efficient technologies to avoid further depletion of the finite water resources.

4. Historically, most government resources for agriculture have been channeled to large-scale, centrally planned cotton and wheat production coupled with managed input supplies, production targets, and state-run marketing organizations. Although small-scale farmers received minimal government support, they were permitted to produce alternate crops, including horticultural crops, primarily for immediate household consumption. As a legacy of this policy, small-scale farms have come to dominate horticultural production. In 2017, small-scale farms managed 21% of vineyards and orchards, contributing 51% of horticultural production by volume, and over 65% by value. The low horticultural productivity of small-scale farms has remained a persistent constraint. Land fragmentation, with farmers cultivating multiple scattered plots, leads to diseconomies of scale. Investment decisions regarding the design and specifications of equipment, machinery, and other productive assets rest with individual farmers, and are not coordinated to exploit synergy opportunities.

5. Insecurity in lease tenure also discourages many small-scale farmers from undertaking investment to improve productivity. Those willing to invest are still confronted with limited access to finance. In recent years, the ADB and other development partners supported the horticulture subsector through on-lending financial intermediaries. However, small-scale farmers are largely unable to access these credit lines because of the (i) relatively high cost of application in relation to loan size; (ii) limited collateral to provide security; (iii) lack of familiarity with financial institutions; and (iv) inability to substantiate credit references. Without a stable supply of quality produce at the farm level, the downstream wholesalers, processors,

and logistics service providers refrain from making investments that are vital for post-harvest quality preservation, value-addition, marketing, and branding of Uzbek horticultural produce.

6. The pilot project will assess the effectiveness and efficiency of alternate implementation arrangements targeting small-scale producers and private entrepreneurs that will not depend on collateral requirements of formal financial intermediaries. The project readiness facility (PRF) (pilot will also evaluate the performance of the Ministry of Agriculture's (MOA's) Agroservis Operator (ASO) in managing small-scale horticultural intensification and expansion in two priority horticultural districts (i) existing production areas, and (ii) currently un-developed areas for subsequent allocation to small-scale farmers. Successful outcomes from the pilot will be replicated in a future sector lending modality expected to be financed by ADB. The PRF pilot is consistent with ADB's strategy of 'a vibrant and inclusive market economy including transformation of the State's role' as it supports private sector development, and reduces socio-economic disparities, while promoting regional cooperation and integration.

## **B. Project Description**

7. The proposed PRF will pilot a new model of horticultural expansion and intensification, which can be scaled up with an ensuing investment project. To address climate impacts, irrigation water constraints, and shrinking arable area, the model will modernize existing horticultural farms and convert abandoned farmland into productive vineyards and orchards. The modernized and inclusive farms, new vineyards, and orchards, will be equipped with suitable climate-resilient features including (i) drip irrigation which can increase crop yields by 40% and reduce water consumption by 75%;<sup>1</sup> (ii) fertigation systems and other technologies for better crop management;<sup>2</sup> (iii) ecoengineering including shelterbelt to conserve biodiversity, reduce wind erosion, and control moisture loss by blocking hot drying winds; and (iv) cold storage, handling and transport facilities. To support men and women small-scale farmers to overcome challenges in securing financing, the PRF will pilot the transfer of new vineyards and orchards to small-scale farmers. They will repay the investment costs through subloan agreements over a period of seven years.<sup>3</sup>

8. The PRF will support the government's efforts to enhance productivity by developing land at scale and coordinating on-farm investments to optimize economies of scale. The investment costs will be recouped from the subloans serviced by men and women small-scale farmers. This new model is replicable and will achieve three objectives: (i) existing orchards upgraded and abandoned farmlands modernized to enhance climate resilience of the horticulture subsector; (ii) men and women small-scale farmer's access to finance and livelihoods improved; and (iii) public fiscal burden reduced.

9. The PRF will cover two districts: Kitob district of Kashkadarya province, and Bakhmal district of Jizzakh province. It has two outputs:

- (i) **Output 1: Climate resilient horticulture intensification piloted.** This output will establish climate adaptive farming systems, and most investment under this output is of Type 2 adaptation and qualifies as climate financing. In Kitob district, the PRF will (i) convert abandoned farmland into sustainable and productive vineyards and orchards; (ii) operate and maintain the new vineyards and

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<sup>1</sup> With increasing river water shortages and more frequent droughts, optimized irrigation efficiency and rehabilitation of aging infrastructure will support climate adaptation.

<sup>2</sup> Fertigation is the application of fertilizers or nutrients into a farming system via the irrigation network, wherein the nutritious inputs are dissolved into water and then absorbed directly by plants when they uptake water.

<sup>3</sup> Subloan repayment will commence when the new vineyards and orchards generate positive cashflow in the fourth year of PRF implementation. While the repayment period will extend beyond the implementation period, the PRF will support the establishment of the repayment system, including drafting of the subloan agreement, and training to the implementing agencies on subloan monitoring and administration.

orchards using mechanized and climate-smart agricultural practices in anticipation of rising temperature by 1.2°C as early as 2050;<sup>4</sup> (iii) pilot an innovative financing mechanism by subdividing the vineyards and orchards into smaller plots, to be leased to men and women small-scale farmers through subloan agreements;<sup>5</sup> and (iv) supervise subloan repayment.<sup>6</sup> For the first three years of establishment, professional horticulture farm operators will be recruited to operate the vineyards and orchards as consolidated blocks. During the subleasing phase, either the same operators or new service providers will be engaged to maintain and operate communal assets such as the tractors and irrigation systems.

In Bakhmal district, the PRF will enhance productivity of existing small-scale horticultural farms. It will support farmers, including women, to (i) identify and screen eligible productivity investments, taking into consideration water security, soil quality issues, and sensitivity of the farming system to climate risks and projected climate change; (ii) implement the investments; (iii) transfer assets ownership to small-scale farmers, in exchange for subloan agreements; and (v) supervise subloan repayment.<sup>7</sup>

In both districts, the PRF will provide capacity building in climate-smart horticultural management to beneficiary farmers and those in adjoining plots. Women will be adequately represented in capacity building training. The location and time schedule of the training will accommodate women's household responsibilities as caregivers. The topics to be covered will include drip irrigation, fertigation, and other technologies that are typically considered as male's domain. In Kitob district, the allocation of new vineyards and orchards will be conducted to include women and female farmers will be empowered by holding the subloan agreement in their name.

- (ii) **Output 2: Commodity value chains consolidated and strengthened for value addition.** Output 2 will support local entrepreneurs, including women, who are input suppliers, service providers, aggregators and processors, that provide critical functions to the local horticulture value chain. The PRF will (i) identify and screen eligible investments to promote a climate positive business model and reduce the carbon footprint along the value chain, including activities undertaken by women;<sup>8</sup> (ii) support civil works design for green infrastructure, equipment specifications, and their procurement; (iii) transfer assets ownership in exchange for subloan agreements; and (v) supervise subloan repayment. There will be a target set for the number of female entrepreneurs to be supported under this output. The PRF is to ensure small-scale farmers can receive adequate and affordable logistical support from local enterprises, as a precursor for horticultural expansion and intensification.

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<sup>4</sup> World Bank. Climate Change Knowledge Portal. <https://climateknowledgeportal.worldbank.org/> (accessed 13 December 2022). climate-smart agricultural practices include (i) water saving technologies, such as fertigation, to reduce crop water consumption; (ii) shade-cloth to protect crops against rising temperature and hail damage; and (iii) selection of heat tolerant varieties for replanting activities.

<sup>5</sup> The vineyards and orchards will be designed, constructed, and operated by contractors as consolidated blocks in the first three year of establishment. At the fourth year, small-scale farmers will cultivate individual plots, but will contribute to the upkeep of communal assets (for example, water pumps or access road) that serve the entire blocks.

<sup>6</sup> The proposal to subdivide plots was well received during field consultations.

<sup>7</sup> Field survey in Bakhmal district indicates that water shortage, lack of cold storage, and high transportation cost are the major constraints. Accordingly, drip irrigation, water pumps, cold storage, and refrigerated trucks are identified as the priority potential investments.

<sup>8</sup> Appropriate options to pilot test renewable energy sources for drying, storage and processing will be considered.

10. The PRF is aligned with the government mitigation and adaptation priorities for promoting water efficient technologies, as referenced in its Updated Nationally Determined Contribution Report,<sup>9</sup> and Concept for the Development of Water Resources Sector 2020-2030.<sup>10</sup> Support to increase small-scale farmers' income through intensive development programs and adoption of new farming technologies is aligned with the Agriculture Development Strategy of Uzbekistan for 2020-2030, which calls for (i) improvement in the administration systems and strengthening of value chain actors; (ii) provision of modern equipment to bolster the capacity of agricultural producers; (iii) improvement in the use of and sustainable management of land, water, and agricultural resources; and (iv) introducing resource saving technologies and attracting investments in agriculture.<sup>11</sup>

11. Project implementation will be for four and a half years (January 2024–June 2028). The MOA will be the executing agency, and the International Center for Strategic Development and Research in the Field of Food and Agriculture (ISCAD) will be the main implementing agency. The ASO under the MOA's Agency for Orchards and Greenhouse Development will assist ISCAD in procurement and subloans administration.<sup>12</sup> The PRF implementation experience will prepare the ASO to administer the ensuing investment project with the establishment of a project implementation unit, and sufficient capacity building in advance of the full investment project. Table 1 outlines the indicative implementation arrangements.

**Table 1. Indicative Implementation Arrangements**

Aspects	Arrangements
Indicative implementation period	January 2024–June 2028
Indicative completion date	30 June 2028
Management	
(i) Executing agency	Ministry of Agriculture
(ii) Key implementing agency	(i) International Center for Strategic Development and Research in the Field of Food and Agriculture (ii) Agroservis Operator

Source: Transaction Technical Assistance (TRTA) Concept Memo, 2023

### C. Purpose of Environmental Assessment and Review Framework

12. This Environmental Assessment and Review Framework (EARF) is applicable for all subprojects funded by the ADB under the project entitled 'Preparing the Horticulture Intensification and Productivity Enhancement Project' (the project). The document provides guidance on screening, assessment, institutional arrangements, and processes to be followed for subprojects that are prepared after Board approval.

13. This EARF (i) describes the project and its components; (ii) explains the general anticipated environmental impacts and mitigation measures for the proposed activities to be financed under the PRF; (iii) specifies the requirements that will be followed in relation to screening and categorization, assessment, and planning, including arrangements for meaningful consultation with affected people and other stakeholders and information

<sup>9</sup> Government of Uzbekistan. 2021. Uzbekistan First NDC (updated submission). [https://unfccc.int/sites/default/files/NDC/2022-06/Uzbekistan\\_Updated%20NDC\\_2021\\_EN.pdf](https://unfccc.int/sites/default/files/NDC/2022-06/Uzbekistan_Updated%20NDC_2021_EN.pdf) (accessed 13 December 2022).

<sup>10</sup> Government of Uzbekistan. 2021. Concept for the Development of Water Resources Sector of Uzbekistan for 2020-2030.

<sup>11</sup> Global Green Growth Institute. 2022. GGGI Uzbekistan Insight Brief: Agriculture sector in Uzbekistan and Karakalpakstan. Legal & Political Framework Review.

<sup>12</sup> ASO was established in April 2021 as a state unitary enterprise under MOA's Agency for Orchards and Greenhouse Development. Its key mandate is to assist ISCAD in the implementation of the World Bank's Agriculture Modernization Project (\$130 million), especially in administering loans to small-scale farmers. For the proposed PRF, ASO will not be directly involved in daily operations of the vineyards and orchards, which will be managed by private professional horticulture farm operators (para. 16.i).

disclosure requirements; (iv) assesses the capability of the project proponents to implement national laws and ADB's requirements, and identifies needs for capacity building; (v) specifies implementation procedures, institutional arrangements, and capacity development requirements; and (vi) specifies monitoring and reporting requirements.

14. The EARF also specifies the criteria for eligibility to ensure that the quality of the subprojects is identified and delivered. The EARF also defines environmental assessment requirements in order to comply with the applicable laws and regulations of the government of Republic of Uzbekistan (the government) and with the ADB Safeguard Policy Statement (2009) (SPS 2009).

## **D. Environmental Categorization**

15. The sub-projects under this loan are classified as Category B or C for environment under ADB Safeguard Policy Statement (SPS, 2009). This is due to the proposed subprojects' potential adverse environmental impacts being site-specific and short term, and with some sub-projects potentially having minimal impact on the environment due to their plots size and planning activities.

16. Each subproject will be individually categorized at the beginning of the environmental planning process, based on the Rapid Environmental Assessment (REA) checklist (APPENDIX 1) and being required to be either Category B or C.

17. According to the plan, only plots less than 10 ha in size will be selected as plot projects. Therefore, it is most likely that an Environmental Code of Conduct will need to be developed due to the scale and extension of the anticipated impacts.

18. For projects categorized as category B, an IEE will need to be prepared in accordance with the guidance provided in the following sections.

## **II. OVERVIEW OF THE PROJECT COMPONENTS**

### **Output 1: Bakhmal District On-farm Initiatives**

19. **The Concept.** Activities in Bakhmal follow different procedures as project support is directed solely at existing small-scale farms. The results from this approach on existing farmers will be compared to results from initiatives on new areas being developed at scale for distribution to small-scale farmers. In Bakhmal, the project will identify small-scale farmers wishing to upgrade or diversify their horticultural production systems to improve livelihoods/income from their existing holdings. Interested farmers will identify the types of assistance that can be offered through the project according to eligibility criteria, and the project will organize the resultant works programs on farmers' existing land holdings. Beneficiary farmers will not receive funds directly but can share in the benefit from 'in kind' development on their land. On completion of the works/development, ownership of the improvements will be transferred to the beneficiary farmer who will, in turn, enter into a subloan agreement with ASO to repay the funds in the amount used to develop individual farmer improvements. This will enable ASO to service the ADB loan in accordance with the loan agreement through the Ministry of Finance.

20. **Eligible Investments.** The list of eligible investments to be funded by the project in Bakhmal has been developed based on responses from focus group discussions, consultations with the local administrations, and TRTA consultant field investigations. As investments are intended to 'intensify and expand' horticultural productivity, the range of investments are, by necessity, broad - not restricted to a specified type of investment nor to a



specific horticultural commodity as this is in direct conflict with the principles of free and open markets. Typically, eligible investments will include (i) partial orchard replacement, (ii) development of on-farm water resources, (iii) trellising and shade cloth, (iv) boundary fencing, (v) interplanting with diversified species, (vi) farm machinery and equipment, (vii) small-scale product handling equipment, and (viii) sorting, grading and on-farm refrigerated storage facilities. With such a diversity of eligible investments and the large number of small-scale farmers likely to participate in the project, a group approach is desirable to improve implementation efficiency.<sup>16</sup>

21. **Potential Beneficiaries.** Being focused on small-scale farmers, only farmers with less than 10 ha of productive horticulture will be eligible to participate. Any horticultural commodity can be supported under the project from vegetables (a short-term crop), annual crops, and perennial tree crops (vines and orchards). Any small-scale farmer producing any of these crops will be eligible to participate in the project in Bakhmal. The geographic distribution of these farms tends to be concentrated along the valley floors and extend up the slopes on gently undulating land. In spite of this natural concentration, eligible farms are widely scattered throughout these areas making on-farm development work cumbersome and inefficient.

22. ASC will need to establish a District Coordination Office within the District Hokhimiyat Office to organize potential beneficiaries and deliver individual on-farm improvements. Its first task will be to identify interested farmers. This will require a public information campaign followed by farmer discussions in the relevant makhallas.<sup>17</sup> In these discussions, potential beneficiaries will be informed of the eligibility requirements and of beneficiary obligations to service the debt for development that the project will organize on their land. Follow up discussion with interested farmers will need to identify investments requested by the beneficiaries. At this stage, technical due diligence of farmer requests will be carried out as some may be technically inappropriate given the natural conditions of the area. This process will be supported by the implementation support consultants (ISC). The consultation process will identify those farmers interested in participation and also, what are the interventions requested.

23. Criteria to guide the identification of eligible farmers to participate in the project are as follows:

- (i) Only farmers with less than 10 ha of horticultural activities on their properties are eligible;
- (ii) Requested on-farm investments must be assessed as appropriate and feasible,
- (iii) Farmers must allow contractors to enter their properties to carry out the requested development;
- (iv) Farmers must agree to undergo training in the operation and maintenance of the assets established on their farms;
- (v) Farmers must agree to enter into a loan repayment agreement with ASO; and
- (vi) Selected plots have to be located outside of any buffer zone and protected areas.<sup>13</sup>

24. While the makhalla committees will provide a convenient access point for informing farmers about the project, common interest groups can provide an efficient mechanism to effect individual on-farm investments.

25. **Development Process.** The use of framework contracts is recommended as a means of undertaking a large number of small and geographically disbursed works on individual

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<sup>13</sup> Mainly buffer zones of irrigation canals and rivers. For this, non-objection/consultations with Ministry of Water Resources and Ministry of Natural Resources could be required

farms. Eligible farmers can be grouped either through existing mechanisms (clusters and cooperatives) or be organized through common investment groups (e.g. those requesting boreholes), depending on farmer demand. Contracts to complete on-farm works will be procured by ISCAD and contracts executed by ASO to carry out works. Once works have been commissioned, the cost for individual development will be calculated that will form the basis of the loan agreement between the beneficiary farmer and ASO. Each contract will include a warranty clause and funds retained until the warranty period has expired.

26. It is anticipated that following activities will be implemented on selected plots:

- (i) Preparation of detailed design of the plot layout based on the topographic data provided by local district authorities, including water source identification and buildings;
- (ii) Land preparation, including deep ploughing, ripping the planting lines, harrowing, and surface levelling for drainage;
- (iii) Horticulture crop establishment, including planting materials, basal fertilizer application, organic fertilizer application, and hydrogel assimilation;
- (iv) An irrigation network, including water source development, storage reservoir, pump station, electric connections including a transformer, delivery pipes to the site, site distribution pipes, and a trickle irrigation system throughout the plot;
- (v) Construction of internal roads to facilitate plot management and the extraction of harvested produce;
- (vi) Purchase of machinery and equipment needed to operate the estimated 100 ha of vines;
- (vii) Construction of essential buildings needed to house machinery and equipment used on the site; and
- (viii) Site maintenance of the developed area during the 3-years after establishment (includes pruning, tying leaders, weed control - mechanical, pest and disease control, and field maintenance etc.).

## **Output 2: Value-addition Initiatives**

27. **The Concept.** Activities under this output will be implemented in the same manner in the two pilot districts, regardless of on-farm interventions. The project will first identify potential investments to resolve missing elements in horticulture value chains in target districts. These may not relate directly to the immediate focus of on-farm initiatives developed under the project, provided they are consistent with the development of the sector. The TRTA has undertaken initial investigations in the target districts to identify potential subprojects. The project will work with identified entrepreneurs whose commercial activities are consistent with horticulture value chains. It will assist the entrepreneur to develop a feasibility study for the investment and submit this to the project as a potential investment proposal. The project will confirm the eligibility of the proposal and review the technical and financial feasibility of the investment before proceeding. The project will confirm the proposal as eligible and feasible, then have detailed designs prepared for the investment. It will procure the necessary works contracts in accordance with ADB and local government requirements. Upon commissioning, the project will calculate the costs incurred from the development that will establish the amount of the subloan to be serviced by the beneficiary. It will prepare a subloan agreement to transfer ownership to the beneficiary in return for their commitment to service the development loan.

28. **Eligible Investments.** Based on the field interviews in the two districts, the list of eligible investments shall include:

- (i) Construction of premises for the operations of a value addition enterprises;
- (ii) Machinery and equipment required to carry out value added activity;

- (iii) Equipment for washing, grading and processing horticultural goods;
- (iv) Cooling equipment for transport and storage of horticultural goods, and
- (v) Other relevant items needed to consolidate the integrity of the concerned value chain.

29. **Potential Beneficiaries.** These shall be limited to private entities wishing to expand or diversify their activities in collecting, grading, storing, packing and processing horticultural produce grown in the two target districts. The enterprises need not necessarily be physically located in the target district but must source a considerable quantity of raw material from the target districts. Priority will be given to existing enterprises that are physically established in the target district. Those that can demonstrate an operating history within the sector will also receive priority consideration for project financing.

30. **Development Process.** ASO will conduct several awareness-raising meetings in the districts to alert potential beneficiaries.

### III. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

#### A. ADB Safeguard Policy Statement (2009)

31. The ADB SPS (2009) sets out policy principles and outlines the delivery process for ADB's safeguard policy in relation to environmental safeguards. The ADB has adopted a set of specific safeguard requirements that borrowers/clients are required to meet in addressing environmental and social impacts and risks. ADB staff will ensure that borrowers/clients comply with these requirements during project preparation and implementation. The safeguard policies are operational policies that seek to avoid, minimize or mitigate the adverse environmental and social impacts of projects including protecting the rights of those likely to be affected or marginalized by the development process.

32. The ADB SPS (2009) consists of three operational policies on the environment, involuntary resettlement, and indigenous peoples. The ADB has developed Operational Procedures to be followed in relation to the ADB SPS (2009) and these are included in the ADB Operations Manual.

33. The SPS (2009) applies to all ADB-financed and/or ADB-administered projects and their components, regardless of the source of financing, including investment projects funded by a loan; and/or a grant; and/or other means, such as equity and/or guarantees. The ADB works with borrowers and clients to put into practice the requirements of the SPS.

34. The objectives of the ADB's safeguards are to:

- (i) Avoid adverse impacts of projects on the environment and affected people, where possible;
- (ii) Minimize, mitigate, and/or compensate for adverse project impacts on the environment and affected people when avoidance is not possible; and
- (iii) Assist borrowers and clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks.

35. The SPS (2009) sets out the policy objectives, scope and triggers, and principles for three key safeguard areas:

- (i) Environmental safeguards;
- (ii) Involuntary resettlement safeguards; and
- (iii) Indigenous peoples' safeguards.

36. To help borrowers and clients and their projects achieve the desired outcomes, the ADB adopts a set of specific safeguard requirements that borrowers and clients are required to meet in addressing environmental and social impacts and risks. These safeguard requirements are as follows:

- (i) Safeguard Requirements 1: Environment (Appendix 1 of SPS),
- (ii) Safeguard Requirements 2: Involuntary Resettlement (Appendix 2 of SPS),
- (iii) Safeguard Requirements 3: Indigenous Peoples (Appendix 3 of SPS), and
- (iv) Safeguard Requirements 4: Special Requirements for Different Finance Modalities (Appendix 4 of SPS).

37. In accordance with the ADB SPS (2009), ADB funded projects are classified into the following categories:

- (i) **Category A.** The proposed project is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented; impacts may affect an area larger than the sites or facilities subject to physical works. A full-scale environmental impact assessment including an environmental management plan (EMP), is required.
- (ii) **Category B.** The proposed project's potential environmental impacts are less adverse and fewer in number than those of category A projects; impacts are site-specific, few if any of them are irreversible, and impacts can be readily addressed through mitigation measures. An initial environmental examination (IEE), including an EMP, is required.
- (iii) **Category C.** The proposed project is likely to have minimal or no adverse environmental impacts. No environmental impact assessment or IEE is required although environmental implications need to be reviewed.
- (iv) **Category FI.** The proposed project involves the investment of ADB funds to, or through, a financial intermediary.

38. The SPS (2009) key requirements include screening for significant impacts and categorization, consultation, and disclosure. Proposed projects are screened according to type, location, scale, and sensitivity and the magnitude of their potential environmental impacts, including direct, indirect, induced, and cumulative impacts.

## **B. National Environmental Assessment Requirements**

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

40. The Ministry of Natural Resources (MNR) is the authorized state body in the field of the SEE. The Center of State Environmental Examination (CSEE) under the MNR carries out the SEE for projects classified under Categories I and II to assess their environmental impact (high and medium risk).

41. The CSEE in the regions and in the Republic of Karakalpakstan carries out the SEE for projects classified as Category III and IV (low risk and local risk) in order to assess their environmental impacts.

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

- (i) **Stage I:** A Preliminary Environmental Impact Statement (PEIS) shall be prepared during preparation of a proposed project prior to any fund allocation for development.
- (ii) **Stage II:** An Environmental Impact Statement (EIS) shall be carried out on a basis of a conclusion of the environmental expertise issued at the first stage of the assessment. The second stage of the assessment is also submitted to the CSEE, and the conclusion must be received before the start of construction.
- (iii) **Stage III:** State Environmental Consequences (SEC) is the final stage of the SEE process and shall be carried out prior to the project start. The report will include (i) a detailed description of changes to be made to the project design as a result of the CSEE review during the first two stages of the environmental assessment process, (ii) comments received during public consultations, (iii) environmental standards applicable to the project, (iv) environmental monitoring requirements related to the project, and (v) the key opinion.

43. Types of economic activities assessed by SEE are classified as one of four categories:

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

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

45. In accordance with national legislation, it is anticipated that all subprojects will belong to Category 3 with respect to their environmental impact (that is, low impact risk).<sup>14</sup> Prior to commencing construction, such subprojects therefore require an Environmental Impact Assessment and Environmental Appraisal from the respective provincial branches of the MNR. Environmental Appraisal will indicate necessity of preparation of the next stage national EIA a Statement on Environmental Consequences (SEC).

46. **Table 2** presents the approvals and permissions from national agencies which need to be received prior the commencement of civil works and project operations.

**Table 2: List of Necessary Approvals and Permissions**

No.	Document Name	Time of Receiving Permission	Responsible Entity
1	Environmental Appraisal (Positive Conclusion of Environmental Expertise) - for projects categorized as B	Prior to commencement of the construction works	ASO (IA)
2	Permits for drilling wells and usage of ground water	Prior to commencement of the construction works	Contractor

<sup>14</sup> The Decree of Cabinet of Ministers' of the RU No. 541 dated 2020, Appendix 2, para 43

No.	Document Name	Time of Receiving Permission	Responsible Entity
3	Permits for water use from wells	Prior to commencement of plots operation and maintenance	Contractor
4	Statement on Environmental Consequences (as per requirements indicated in Environmental Appraisal for category B projects)	Prior to commencement of plots operation and maintenance	ASO (IA)

ASO = Agroservis Operator of the Ministry of Agriculture.

47. In addition to the national environmental assessment process, an Initial Environmental Examination (IEE) will be prepared following SPS (2009) for the subloans categorized as B. For subloans categorized as category C, a simplified Environmental Management Plan will be prepared.

### C. National Institutional Framework for Environmental Assessment

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

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

50. The other state agencies involved directly or indirectly in the regulation and protection of the environment are:

- (i) Ministry of Construction.
- (ii) Ministry of Agriculture.
- (iii) Center for Strategic Development and Research in the Field of Food and Agriculture.
- (iv) Ministry of Health.
- (v) Ministry of Water Resources.
- (vi) State Committee for Geology and Mineral Resources (Goskomgeologia).

### D. National Environmental and Social Policy and Regulations

#### 1. National Environmental Policy and Regulations

51. The legal framework in the field of nature protection and management established in the Republic of Uzbekistan (RUz) provides to the citizens the rights and duties specified in the country's Constitution. The RUz has enacted several supporting laws and statutes for environmental management and is party to several international and regional environmental agreements and conventions.

52. The key national environmental law is the **Law on Nature Protection (1992)**. Other applicable laws, regulations and standards relating to environmental assessment and management include the following:

- (i) Law "On Nature Protection" (1992, amended in 2021);
- (ii) Law "On Ambient Air Protection" (1996, amended in 2006);
- (iii) Law "On Water and Water Use" (1993 the latest amended in 2021);
- (iv) Land Code of the RUz (1998);
- (v) Law on Wastes (2002, amended in 2011);
- (vi) Law on Environmental Audit (2021);
- (vii) Law on Environmental Control (2013 amended 2021);
- (viii) Law "On Protection of Flora" (1997, amended in 2016);
- (ix) Law "On Plant Quarantine" (2018);
- (x) Law "On Agricultural Plants Protection from Pests, Diseases and Weeds" (2000);
- (xi) Law "On Protection and Use of the Wildlife" (2016);
- (xii) Law "On Veterinary Medicine" (2015);
- (xiii) Law "On organic products" (2022);
- (xiv) Law on Seed Production (2019);
- (xv) Resolution of Cabinet Ministries of RUz "On Approval of Rules on Electrical Facilities Protection" #1050 dated from 2018; and
- (xvi) The Red Data Book of Uzbekistan is the main document containing aggregate

## 2. Uzbekistan National Labor Requirements

53. The **Constitution of the Republic of Uzbekistan** (1992) includes a chapter on the economic and social rights of citizens. According to it, everyone has the following rights:

- (i) "Have the right to work, free choice of work, fair conditions of labor and protection against unemployment in the procedure specified by law. Any forced labor shall be prohibited except for punishment under the sentence of a court or some other instances stipulated by law" (Chapter IX, Article 37);
- (ii) The right to rest is included in Article 38: "Citizens, working on hire, shall be entitled to a paid rest. The number of working hours and paid labor leave shall be specified by law";
- (iii) Social security in old age in the event of disease, disability, loss of breadwinner and in other cases stipulated under the law (Article 39);
- (iv) Have the right to skilled medical care (Article 40);
- (v) A guarantee of equal rights for men and women (Article 46); and
- (vi) "Have the right, both individually and collectively, to submit applications and proposals, and to lodge complaints with competent state bodies, institutions or public representatives. Applications, proposals and complaints shall be considered in the procedure and within the time-limit specified by law" (Chapter VIII, Article 35).

54. The Labor Code of the Republic of Uzbekistan (1996).

55. The Law "On Occupational Health and Safety (OHS) (1996).

56. The Law "On Labor Protection", (2016).

57. The Law on Occupational Safety in Hazardous Production Facilities (2006).

58. Enforcement of OHS legislation. The main state bodies responsible for the implementation of OHS policy are:

- (i) Ministry of Employment and Labor Relations, including the State Labor Inspection under the ministry with territorial branches distributed throughout the Republic;
- (ii) State Inspection for Safety in Industry, Mining and Housing and Utilities Sector; and
- (iii) Department of State Sanitary Epidemiological Supervision under the Ministry of Health of the Republic of Uzbekistan.

59. The Ministry of Employment and Labor Relations has an OHS directorate and the State Labor Inspection and its regional branches in the Republic of Karakalpakstan, viloyats (provinces), and the Tashkent city and district directorates and branches on labor, employment and social security. They constitute a single system of supervision and monitoring compliance with OHS requirements for ministries and agencies, institutions, organizations, and industrial and agricultural enterprises, with the exception of hazardous facilities that are under the jurisdiction of the State Inspection on Safety in Industry, Mining and the Housing and Utilities Sector.

60. Other laws and standards applicable for the Project are:

- (i) Resolutions of the President # 5863 "On Approval of Concept of Environmental Protection of the Republic of Uzbekistan till 2030";
- (ii) SanR&N No 0339-16 - Sanitary Rules and Norms for Planning and Development of Populated Areas of Uzbekistan;
- (iii) SanR&N No 0289-10 - Sanitation rules hygiene requirements for the organization of construction production and construction work;
- (iv) Law on Protection and Use of Archeological Heritage (2009);
- (v) SanR&N No 0318-15 - Hygienic and anti-epidemic requirements for the protection of water in reservoirs on the territory of the Republic of Uzbekistan;
- (vi) SanR&N No 0255-08 - Main criteria for hygienic assessment of the water bodies contamination for assessing health risks for population in Uzbekistan;
- (vii) SanR&N 0202-06 - The procedure for issuing permits for special water use, development and approval of projects of maximum permissible discharges (MPD) of substances entering with wastewater into water bodies and on the terrain;
- (viii) SanR&N 0293-11 - Hygienic standards list of maximum permissible concentrations (MPC) of pollutants in the atmospheric air of populated areas on the territory of the Republic of Uzbekistan;
- (ix) KMK 3.01.02-00 - Construction safety;
- (x) O'z DSt 1057:2004 - Vehicles. Safety requirements for technical conditions;
- (xi) SanR&N No 0212-06 - Hygienic assessment of the degree of soil pollution of different types of land use under specific conditions of Uzbekistan;
- (xii) SanR&N No 0183-05 - Hygienic requirements for the quality of the soil in settlements areas in specific natural and climatic conditions of Uzbekistan;
- (xiii) BR&N No 2.01.08-96 – Noise protection;
- (xiv) BR&N No 3.01.02-00 - Construction Safety Standards;



- (xv) Law of the Republic of Uzbekistan on dehkan farms (01.04.2021 #680);
- (xvi) Decree of the President of the Republic of Uzbekistan # 6243 “on measures to ensure equality and transparency in land relations, reliable protection of land rights and their transformation into a marketable asset”;
- (xvii) Decree of the President of the Republic of Uzbekistan #4246 on measures for further development of horticulture and greenhouse farming in the Republic of Uzbekistan;
- (xviii) Decree of the President of the Republic of Uzbekistan #4919 on measures to further accelerate the organization of the implementation of water-saving technologies in agriculture;
- (xix) Decree of the President of the Republic of Uzbekistan #5995 on additional measures to ensure compliance of quality and safety indicators of agricultural products with international standards;
- (xx) Resolution of the Cabinet of Ministers of the Republic of Uzbekistan #24 on measures for financial support for lemon producers who have introduced a heating system working on alternative energy, as well as for the construction of lemon plantations and the purchase of seedlings;
- (xxi) Resolution of the Cabinet of Ministers of the Republic of Uzbekistan #327 on measures for state financial support of subjects engaged in viticulture, gardening, greenhouse facilities and production of wine products;
- (xxii) Resolution of the Cabinet of Ministers of the Republic of Uzbekistan #52 on measures for the development of horticulture, viticulture and greenhouse facilities within the framework of family business support programs; and
- (xxiii) Resolution of the Cabinet of Ministers of the Republic of Uzbekistan #51 on the approval of the regulation on horticulture and viticulture associations.

#### IV. ANTICIPATED ENVIRONMENTAL IMPACTS

61. Anticipated environmental impacts during subproject implementation will occur during the pre-construction, construction and operation phases of development. A list of anticipated environmental impacts and recommended mitigation measures for each type of subproject are presented in **Table 3**.

**Table 3: Anticipated Environmental Impacts due to Subproject Implementation**

Impact Field	Anticipated Impact on Environment	Mitigation Measures
<b>Value-addition Initiatives</b>		
<b>Pre-construction phase</b>		
Environmental permits	Non-compliance with national regulations.	Develop national EIA and other required environmental documentation in accordance with Table 1 and receive permission from MNR. Approval delays may delay project implementation.
Impact on underground and above ground utilities	Damage to utilities due to construction works and risks for workers to be affected by utilities.	Ensure that project works will not damage underground utilities. Receive permits for works from relevant agencies (water supply, communication, gas supply, electrical networks).

Impact Field	Anticipated Impact on Environment	Mitigation Measures
Discharge standards	Non-compliance with national standards for discharge of waste water and location of WWTP of equipment.	Capacity and treatment process design of WWTP for construction facilities must meet government effluent discharge <sup>15</sup> and location <sup>16</sup> standards.
Social and cultural resources.	Ground disturbance can uncover and damage archaeological and historical remains. Impact on sites of cultural/religious importance during pipe-laying for newly establishing construction sites.	Conduct consultation with representatives of Ministry of Culture.
Construction work camps, stockpile areas, storage areas, and disposal areas.	Locations may cause encroachment/impact either directly or indirectly on adjacent environments. It may also include impacts on inhabitants who might lose their homes or livelihoods due to the project activities.	Construction Camp Management Plan will be developed for proper location of construction camps and its performance.
Traffic	Traffic flow will be disrupted if routes for delivery of construction materials and temporary blockages during construction activities are not planned and coordinated.	Traffic Management Plan will be developed by Contractor and agreed with National Traffic Policy.
Biological resources.	Starting construction works without payment of compensation for cutting trees indicated in LARP will lead to non-compliance with the ADB SPS (2009).	Ensure that all compensations are paid in accordance with LARP prior to launching construction works.
Procurement of machinery, equipment	Non-compliance with national and international requirements during bidding for procurement of machinery and mechanisms.	<p><b>IA will ensure that goods procured for project implementation will comply with ADB Prohibited Investment Activities List set forth at Appendix 5 of ADB SPS;</b></p> <p>Environmental specifications will be included in bidding packages for procurement of machinery under the project. Particularly, toxic level of machinery will meet "Euro 3" environmental requirements as defined by national regulations.<sup>17</sup></p>
<b>Construction phase</b>		
Air quality	Emissions from construction vehicles, equipment, and machinery used for excavation and construction.	<p>Apply watering of construction sites and roads when trucks move during dry season.</p> <p>Cover transported bulk materials.</p>

<sup>15</sup> KMK 2.04.03-96 Sewage. External networks and buildings.

<sup>16</sup> KMK 2.04.03-96 and SanPiN # 0350-17 Sanitarian Norms and Rules on Protection of Atmosphere air in settlements of Republic of Uzbekistan.

<sup>17</sup> Resolution of President of RUZ "On measures for further development of production at the Samarkand automobile plant and renewal automobile park", dated from 14 December 2006.

Impact Field	Anticipated Impact on Environment	Mitigation Measures
		<p>All vehicles and equipment will comply with technical requirements and will pass regular inspection as indicated in the national standards.<sup>18</sup></p> <p>Conduct regular monitoring of air quality in accordance with EMP.</p>
Surface water quality.	Mobilization of settled silt materials, runoff from stockpiled materials, and chemical contamination from fuels and lubricants during construction works can contaminate downstream surface water quality.	
Noise and vibration.	Increased in noise levels due to earth-moving and excavation equipment and the transportation of equipment, materials, and people. Operation of heavy equipment and machines in the nighttime or in the areas close to sensitive receptors can cause nuisance to the surrounding environments/inhabitants.	<p>Conduct noise modelling exercise during construction and operation phases.</p> <p>Develop mitigation measures as necessary.</p> <p>Conduct regular noise measurements monitoring.</p>
Biological resources	Cutting trees out of the project area and indicated ROW will impact on biodiversity.	<p>Before construction works conduct inventory of trees to be cut together with representative from local branch of Ministry of Natural Resources, get necessary permits and pay compensation in accordance with LARP.</p> <p>Mark trees to be cut.</p> <p>Ensure no damage to trees which were not marked.</p>
Soil	Contamination and deterioration of soil quality.	<p>To minimize soil compaction, movement of all vehicles will be allowed only through identified access roads.</p> <p>Use only authorized carriers with getting all necessary permissions per respective national legislation.</p> <p>Prepare Spoil Management Plan as part of SSEMP and ensure this is properly implemented.</p> <p>Prepare Pest Management Plan as part of SSEMP and ensure that it is properly implemented.</p>

<sup>18</sup> "O'z DSt 1057:2004 Vehicles. Safety requirements for technical conditions" and "O'z DSt 1058:2004 Vehicles. Technical inspection. Method of control".

Impact Field	Anticipated Impact on Environment	Mitigation Measures
Land use	<p>Project works implemented outside of the project plots may lead to loss of income of land users.</p> <p>Usage of construction materials from borrow pits opened without permission or from non-official borrow pits will lead to land use issues.</p> <p>Improper re-cultivation of opened borrow pits will damage the environment.</p>	<p>Ensure that all compensations for land acquisition will be completed in accordance with the LARP before the commissioning of construction works.</p> <p>All construction works on the project plots will be implemented within the defined borders of the plots.</p> <p>Ensure that official borrow pits are used for excavation of construction materials.</p>
Waste management	Hazardous	<p>Conclude agreements with local companies for the removal and disposal of waste.</p> <p>Separate all wastes on recyclable and non-recyclable.</p> <p>Re-use or sell recyclable wastes to the relevant agencies, non-recyclable -dispose on the closest landfill.</p> <p>Separate organic wastes and compost them in accordance with G.A.P. as fertilizer for soil.</p> <p>Install enough bins for collecting waste. Clean all waste bins daily and store garbage in a specially designated area in accordance with G.A.P. and open spaces for subsequent removal for disposal on the municipal landfills.</p> <p>Burning oil will be strictly prohibited.</p>
	Non-hazardous wastes	<p>Prohibit the release of used oil or any chemicals into the ground water.</p> <p>All vehicle and machinery maintenance works be implemented in the specially designed workshops.</p> <p>Maintenance Contractor with support of ISC will develop Pest Management Plan and will ensure it is properly implemented.</p> <p>Maintenance Contractor will dispose of used oil in accordance with national regulation<sup>19</sup>.</p>

<sup>19</sup> Resolution of Cabinet Ministries of RUZ # 258 "On collection, storage and further disposal of used technical oil" dated from 4 September 2012.

Impact Field	Anticipated Impact on Environment	Mitigation Measures
		<p>Conclude agreements with local companies for the removal and disposal of waste.</p> <p>Sell recyclable wastes to the relevant agencies, non-recyclable waste will be disposed to the city landfill.</p> <p>Install enough bins for collecting waste. Clean all waste bins daily and store garbage in a specially designated area in the site, and open spaces for subsequent removal for disposal on the municipal landfills.</p> <p>The burning of oil will be strictly prohibited.</p> <p>Conclude agreements on the disposal of used batteries and lamps with relevant specialist agencies.</p>
Socio-economic impacts.	Traffic problems and conflicts in ROW. Roads, people, and businesses may be disturbed by repeated trenching.	<p>Ensure proper implementation of Traffic Management Plan.</p> <p>Hire local population with suitable qualifications for works to the extent possible.</p> <p>Inform the population in advance about planning works.</p>
Occupational health and safety; For workers.	Occupational hazards can arise during construction (e.g., trenching, falling objects, working techniques, non-usage of PPE and etc.).	<p>Contractors will comply with the requirements of the Labor Code of Uzbekistan (1998) and standards on work and health safety.<sup>20</sup></p> <p>Contractors will develop an OHSP. The ISC will review and endorse, and the PIU ISCAD will approve the plans.</p> <p>Contractors will ensure the proper implementation of the above plans.</p>
For communities.	Community hazards can arise during construction (e.g., air quality, noise, falling objects, etc.). Traffic accidents and vehicle collisions with pedestrians during material and waste transportation.	<p>Contractors will inform the population about anticipated works in settlements in advance.</p> <p>Contractors will be required to develop a TMP as part of the SSEMPs, with clear signage of routes of vehicle movements, the enforcement of speed restrictions inside settlements, and transportation schedules to avoid peak traffic periods. Agreement of the TMP will be obtained from the</p>

<sup>20</sup> Construction Norms and Rules # 3.01.01-03. Organization of Construction works. 2003.

Impact Field	Anticipated Impact on Environment	Mitigation Measures
		<p>local traffic police. The TMP will be disclosed to local communities prior to the commencement of construction works on respective sites.</p> <p>Clear signs will be placed at construction sites in view of the public, warning people of any potential dangers such as moving vehicles, the location of hazardous materials and excavations etc. and raising awareness on safety issues.</p> <p>All construction sites (especially inside settlements) must be properly lit and fenced.</p> <p>After the completion of construction works, all negatively affected roads will be rehabilitated at least up to pre-construction condition.</p> <p>Carry out regular awareness campaigns among work staff, including specific hazards associated with the spread of HIV/AIDS.</p> <p>After completion of the main construction, contractors will provide full reinstatement of the construction and camp sites by restoring them to their primary condition.</p> <p>All solid wastes will be removed, and any temporary structures (such as buildings, shelters, and latrines) removed once they are not required.</p> <p>All hardened surfaces within the construction camp area will be ripped, and all imported materials removed.</p> <p>The ISC will conduct a post-construction audit during the defect liability period to ensure that construction sites and camps are properly cleaned and restored to pre-project conditions before the acceptance of works and hand-over to the ASO.</p>
Social and cultural resources.	Risk of archaeological chance finds.	Chance Finding Procedures will be developed and implemented.
<b>Operation phase</b>		

Impact Field	Anticipated Impact on Environment	Mitigation Measures
Air quality	Pollution from operating equipment.	Ensure that all equipment operates in accordance with maintenance protocol. Receive necessary permits accordance with national regulation (Statement on Environmental Consequences). Ensure implementation of G.A.P. requirements.
Water resources	Pollution of water resources due to improper treatment of wastewater.	Ensure that WWTPs are operating properly. Receive necessary permits accordance with national regulation (Statement on Environmental Consequences). Ensure implementation of G.A.P. requirements.
Waste	Hazardous and non-hazardous.	Receive necessary permits accordance with national regulation (Statement on Environmental Consequences). Ensure implementation of G.A.P. requirements.

## V. ENVIRONMENTAL ASSESSMENT FOR SUBPROJECTS AND COMPONENTS

### A. Subprojects Screening and Categorization

62. Only categories B and C subprojects will be eligible for project funding. The initial list of potential subprojects will be screened against the ADB Prohibited Investment Activities List. Other environmental criteria will be applied for each subproject, particularly regarding the location of subprojects in relation to protected areas. For each subproject, a Rapid Environmental Assessment (REA) will be undertaken by the IA and submitted to the ADB for approval to confirm eligibility and categorization. The format of REA is presented in Attachment 1.

### B. Preparation of Environmental Assessment Report

63. Under Output 1, only small plots (no more than 10 ha) will be developed. It is anticipated that impacts from the development of such size of plots will be limited. Therefore, Contractors and farmers will have to implement an Environmental Code of Conduct as provided in Attachment 6.

64. For the construction of facilities, indicated in Output 2, the IA will be responsible to develop an IEE for each subproject.<sup>21</sup> During IEE preparation, baseline data on relevant physical, biological, and socioeconomic conditions within the subproject area will be collected and assessed. Anticipated direct and indirect impacts from each subproject will then be evaluated, as will the risks to physical, biological, cultural and socioeconomic resources. The

<sup>21</sup> Appendix 1 of the ADB's SPS 2009 provides the specific outline and contents for the development of IEEs. Attachment 2 provides the outline of the IEE report. Each IEE prepared during project preparation will provide a template which can be followed for the preparation of IEEs for further subprojects.

assessment will be completed for the whole subproject cycle: pre-construction, construction and operation phases.

65. To mitigate identified negative impacts, an Environmental Management Plan (EMP) will be developed as part of the IEE. Anticipated impacts for each subproject provided in Table 2 of this EARF can be used as a guide for the identification of impacts and risks. The EMP will provide mitigation measures for each impact, the entity responsible for the implementation of mitigation measures, and the anticipated mitigation costs. The EMP will also specify the monitoring parameters, and where and how the monitoring should be implemented. It will also reflect the meaningful consultation and disclosure process, with a provision for a grievance redress mechanism. A description of this procedure is presented in the following chapters.

## **VI. INFORMATION DISCLOSURE, CONSULTATION, AND PARTICIPATION**

### **A. Public Consultation**

66. The IA will carry out meaningful consultations with affected people, civil society, and other concerned stakeholders, and facilitate their informed participation. One of the main goals of the IEE is to facilitate the participation of all stakeholders and local communities at all stages of the project cycle: from the pre-construction phase and construction activities to its operation. Public consultations will be conducted in each subproject site to capture stakeholder opinions about the subproject and agree on subproject activities. The IA will ensure that the consultations will be gender inclusive, responsive, and tailored to the needs of disadvantaged and vulnerable groups. The consultation process and its results will be documented and reflected in the IEE.

### **B. Information Disclosure**

67. The IA will submit to ADB this EARF and the IEEs for all subprojects under this project for disclosure on ADB's website. Moreover, the EARF and IEEs will be translated into local languages and be published on the IA's website.

68. Should an IEE need to be updated due to subsequent changes in the project design, a revised IEE will be prepared and submitted to the ADB for review, approval and further disclosure. Semi-annual Environmental Monitoring Reports (EMRs) will also be prepared and submitted to the ADB for review and approval, and for subsequent uploading on the ADB's and IA's websites.

### **C. Grievance Redress Mechanism**

69. The grievance redress mechanism (GRM) provides for the grievance address of any actions and decisions that violate the rights and legitimate interests of citizens affected by the Project. It also stipulates the procedure for dealing with grievances, from individuals and legal entities, within the project implementation framework.

70. In accordance with the ADB SPS, the GRM will be established immediately after the Project becomes effective. The main goals of the GRM are to ensure the free submission and timely redress of grievances and concerns submitted by project affected persons, as well as to resolve grievances at the Project level. In addition to the GRM being an ADB requirement, the GRM is also regulated by the national legislation of the RUz by the law "On appeals of individuals and legal entities" (No. 445, 2017).

71. The GRM will be established at the project level, considering the local legislation on the resolution of grievances, and ensuring that affected persons are provided with timely resolution of issues arising because of the project.



72. Individuals and legal entities in the Project areas will be fully informed of their rights and procedures to address grievances, whether verbally or in writing, and whether during public consultations and through the local media.

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

74. The project proposes three levels of the GRM:

- (i) **Level-1** – District Coordination Officers (in Kitob and Bakhmal districts), together with the project beneficiary (mahalla) or Contractor;
- (ii) **Level-2** – PIU ISCAD in Tashkent; and
- (iii) **Level-3** – Court of Law (Economic Court).

**Table 4: Contacts of Grievance Redress Responsible Agencies**

Location	Position	Contacts
Bakhmal district	District Coordination Officers	Mustakillik St. 42, City: Usmat, Jizzakh region, 131000, Uzbekistan
Kitob district	Kitob District Coordination Office Khokimiyat of Kitob	Katta Yul St. 32, Ali Qushchi Makhalla, Kitob District, Kashkadarya Region
Tashkent	ISCAD-PIU	Tashkent, Navoi str. 1

**D. Level 1: District Coordination Officers (in Kitob and Bakhmal districts) together with the project beneficiary (mahalla) or Contractor**

75. At this level, an applicant will submit a grievance directly to the District Coordination Officer, who, after the registration of received grievance (application, proposal, grievance), will notify the applicant of the receipt of the grievance and, if requested, will submit registration data according to the records of the registration card (including the registration number, date of registration, person who received the grievance, etc.). All grievances received will be registered in a logbook which will be available at each point of entry to the Project plots.

District Coordination Officers will inform applicants concerning the procedures and terms of the grievance redress, study the nature and specifics of the grievance and, within its powers, will take measures for its redress. In parallel, District Coordination Officers will inform the ISCAD-PIU and relevant beneficiaries of the Project (cities hokimiyats, farmers) of the received grievance.

76. If necessary, a District Coordination Officer will send a grievance to the relevant party to resolve the issue in accordance with established procedures. Depending on its nature, the grievance can be forwarded for redress to state authorities, local authorities, contractors, mahalla community council, hokimiyat, as well as to specially authorized state bodies (such as the Kitob branch of the Ministry of Natural Resources, the State Architecture and Construction Inspectorate, the State Committee on Land Resources, Geodesy, Cartography, and State Cadastre).

77. Also, an affected person may approach a contractor. A Grievance Redress Register must be maintained by the contractor and shared with the ISCAD-PIU and District Coordination Officers for all such grievances. The contractor shall register the grievance and make efforts to resolve the grievance at that level in a consultative manner.

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

79. Grievance redress will comply with the requirements of the legislation of the RUZ requirements.

80. Based on the results of a grievance redress, District Coordination Officers will inform the complainant and ISCAD-PIU concerning the redress results and the measures taken. At this level, District Coordination Officers will be a focal point for dealing with any grievance and will ensure close interaction with local and state authorities, and public administration bodies, for timely and high-quality grievance redress.

#### **E. Level 2: ISCAD-PIU**

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

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

83. If the issue raised in a grievance is not directly related to the Project, the ISCAD-PIU will familiarize the applicant with the goals and objectives of the Project, the measures provided for within the framework of Project implementation, and provide an appropriate explanation of the reasons why this grievance cannot be redressed by the ISCAD-PIU, after which the further instance will be recommended to the applicant where he/she should apply for the decision making.

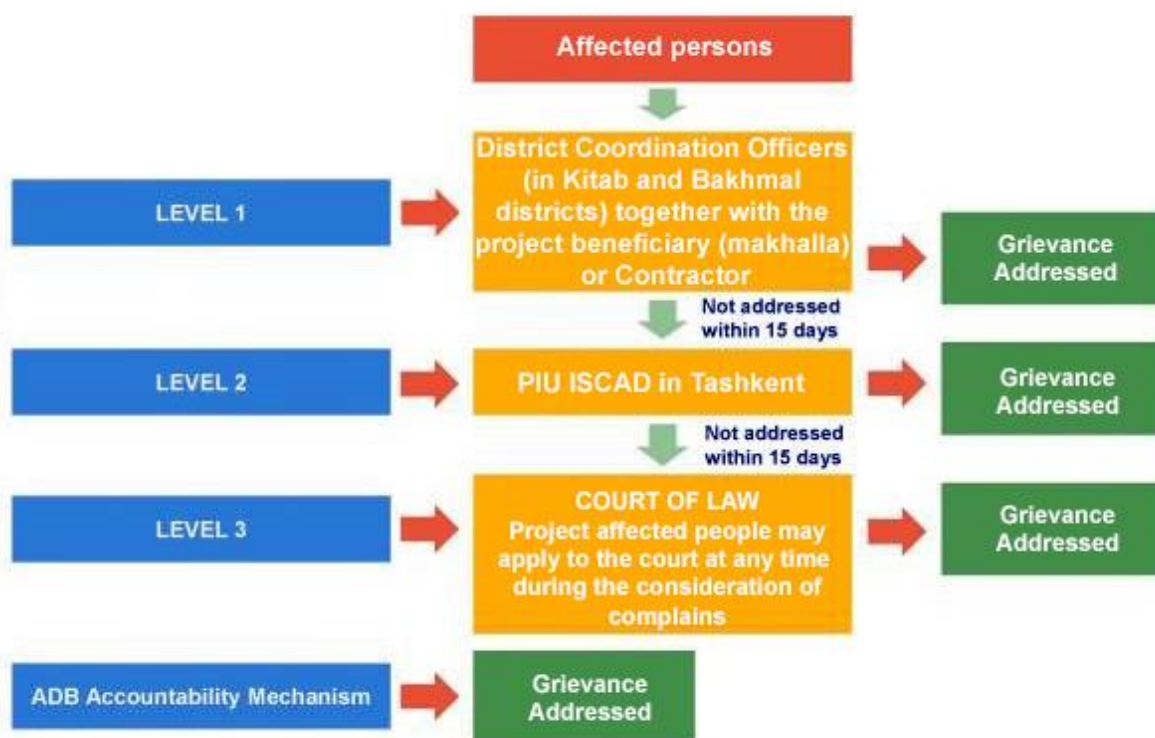
84. When receiving grievances, the ISCAD-PIU will take the following actions:

- (i) If necessary, it will establish a grievance handling team, which will include District Coordination Officers, ISC, representatives of contractors, local state authorities, and public administration bodies (hokimiyats);
- (ii) If necessary, it will arrange the reception of the applicant and consultation on issues of interest within the framework of the Project, collection of information regarding the grievance, as well as monitoring for their complete, timely and high-quality redress;
- (iii) The team will also ensure interaction with an independent appraiser (in case of grievances related to the assessment) to obtain an appropriate evaluation decision (report); and
- (iv) The grievance will be redressed within 15 days from the date of receipt, and in the case when additional study is required, up to one month.

#### **F. Level 3: Court of Law (Economic Court)**

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

86. The procedures and stage of the GRM are outlined in **Figure 1**.



**Figure 1: Procedure and Stages of the Grievance Redress Mechanism**

#### **G. Compliant Handling System of the Republic of Uzbekistan**

87. The national law on the appeals of individuals and legal entities obliges state authorities to deal with requests and provides a clear framework to handle cases. This law has recently replaced previous laws on the requests of citizens and gives the right for individuals and legal entities to file requests. The requests can be in the form of applications, proposals and complaints and submitted in three ways: oral, written, and digital format. In addition to the GRM for the Project, affected persons can also submit their grievances through the Virtual reception of the President of the Republic of Uzbekistan that contributes to the unquestioning implementation of the constitutional rights of citizens to appeal to the President of the Republic of Uzbekistan. Through this information system, any persons can send their applications, suggestions, or complaints to the President of the Republic of Uzbekistan.

88. An online portal<sup>22</sup> provides contact details of the persons of various agencies and state committees, and the days and times at which they are available to resolve grievances, with an option of also sending a grievance through email. The portal has provisions for checking the status of the grievance, and for further appeals if the appellant has been harassed for raising the grievance.

89. The Law of the Republic of Uzbekistan on the Appeals of Individuals and Legal Entities was introduced on 29 October 2014, and this law replaced an earlier law on Appeal of Citizens that was introduced on 13 December 2012. This law guarantees the right to appeal, and prescribes the requirements of an appeal, its form and structure. Further, the timeline for addressing the appeal, the procedure for personal hearing, the need for maintaining records of appeals, and the procedures for second appeal are prescribed.

<sup>22</sup> [https://pm.gov.uz/ru#/map\\_app\\_root](https://pm.gov.uz/ru#/map_app_root)

## **H. ADB's Accountability Mechanism**

90. In addition to the project level GRM required by ADB's SPS, the ADB also has an Accountability Mechanism (AM) Policy (May 2012).<sup>23</sup> While the project level GRM is the responsibility of the EA, the Accountability Mechanism is the responsibility of ADB. The accountability mechanism provides opportunities for people (two or more complainants) that are adversely affected by ADB-financed projects to express their grievances, seek solutions, and report alleged violations of ADB's operational policies and procedures, including safeguards policy. ADB's accountability mechanism comprises (i) a consultation phase led by ADB's special project facilitator to assist people adversely affected by ADB-assisted projects in finding solutions to their concerns, and (ii) providing a process through which those affected by projects can file requests for compliance review by ADB's Compliance Review Panel.

91. ADB's accountability mechanism can be considered a 'last-resort' mechanism. The affected people are first expected to exhaust grievance handling mechanisms described in this IEE and the ADB operations department concerned (ADB Uzbekistan Resident Mission) before lodging a complaint with ADB's Accountability Mechanism.

## **VII. INSTITUTIONAL ARRANGEMENT AND RESPONSIBILITY**

### **A. Implementation Arrangements**

#### **1. Ministry of Agriculture**

92. Project implementation will be for four and a half years (October 2023–March 2028). The MOA is the executing agency and is responsible for overall Project coordination with government agencies, high-level decision making to ensure timely implementation, and liaising with ADB and other development partners. The MOA will provide detailed PIU staffing arrangements for Tashkent and other regions, and associated costs.

1. The main responsibilities of the MOA for this project include:
  - (i) Oversight and monitoring of project implementation,
  - (ii) Adequacy of overall project funding,
  - (iii) Project progress reports,
  - (iv) Project financial management, and
  - (v) Being the primary point of contact on project matters for the ADB.

#### **2. ISCAD - Project Implementation Unit (ISCAD-PIU)**

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

94. The ISCAD-PIU will be responsible for monitoring the implementation of the EMP to comply with the ADB's safeguards requirements and environmental national regulations. The ISCAD-PIU will hire one full time (36 person-months) National Environmental Specialist (PIU-

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<sup>23</sup><https://www.adb.org/contact?target=Hmzj1lfKqMSRDKA0C6/kg==&name=Complaint%20Receiving%20Officer&referrer=node/81970>

NES) exclusively for the project, who will be assisted by the ISC-NES in overseeing the implementation of the EMP.

95. The main responsibilities of the ISCAD-PIU relevant to environmental aspects include:

- (i) Overseeing day-to-day project execution, supervision and management,
- (ii) Collecting necessary inputs to prepare quarterly and annual project progress reports, environmental and social monitoring reports, and a project completion report,
- (iii) Conducting financial, environmental, and social due diligence information for proposed subprojects as necessary in consultation with relevant government agencies and ADB,
- (iv) Administering the project grievance redress mechanisms, and
- (v) Supervising the consultants' work and provide timely guidance.

### **3. Agroservis Operator**

96. The ASO under MOA's Agency for Orchards and Greenhouse Development will assist ISCAD in procurement and subloan administration.<sup>24</sup> The PRF implementation experience will prepare the ASO to administer the ensuing investment project with the establishment of a project implementation unit, and sufficient capacity building in advance of the full investment project.

97. Their responsibilities for day-to-day project implementation and duties relevant to environmental aspects include:

- (i) Developing detailed design and technical specifications, bidding documents for procuring the investment items identified,
- (ii) Forwarding detailed design and technical specifications, and bidding documents to ISCAD to procure goods and works,
- (iii) Leasing newly developed areas to interested parties with an associated debt servicing agreement to repay the development funds used in developing the area and including a contribution to associated on-farm infrastructure developed, and
- (iv) Collecting beneficiary subloan repayments to service the ADB loan through the Ministry of Economy and Finance in accordance with the loan agreement.

#### **a. District Coordination Offices**

98. District Coordination Offices will be in charge of the following:

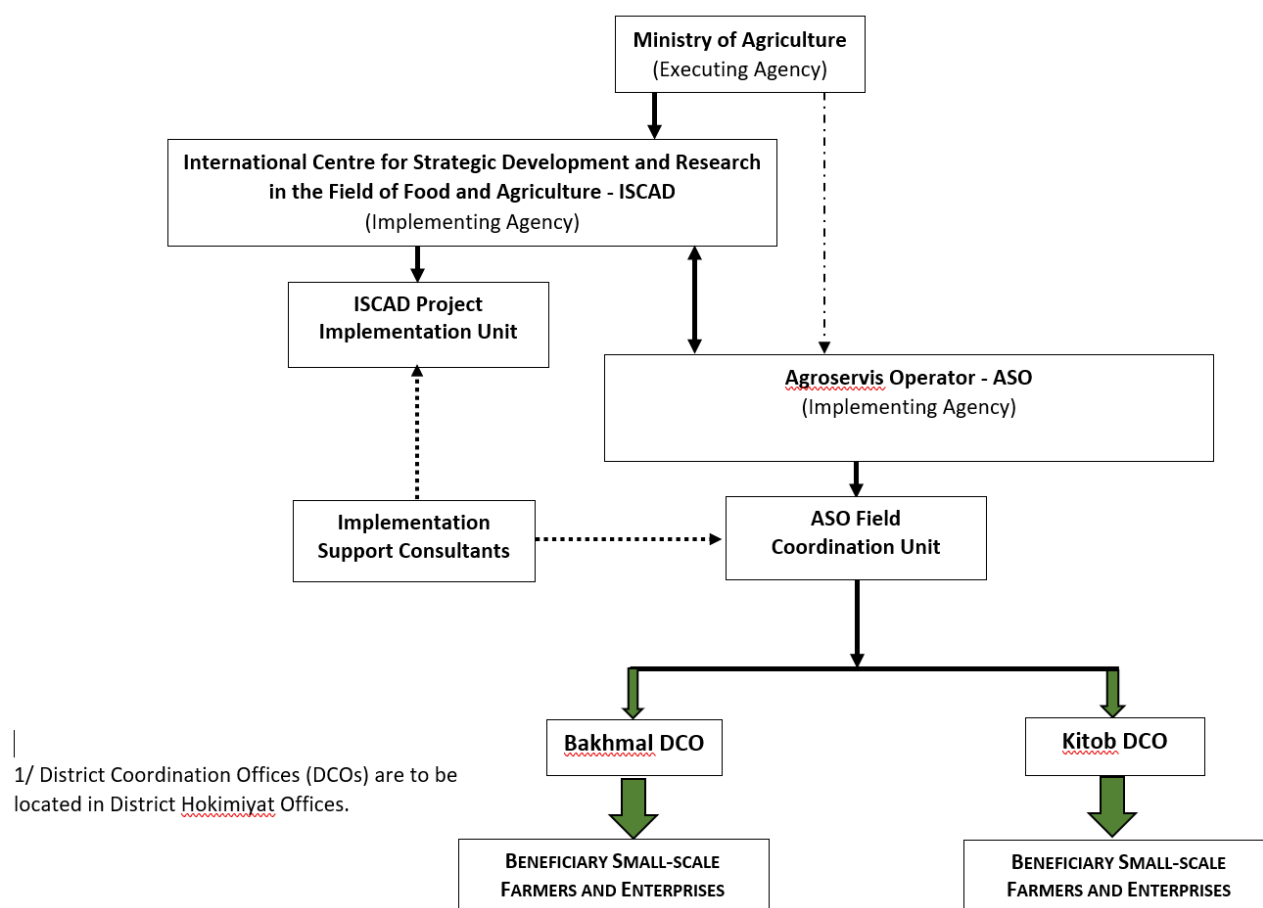
- (i) Coordinating project activities in the district,
- (ii) Assisting to identify beneficiary farmers and enterprises,
- (iii) Assisting to identify investments to be financed by the project,
- (iv) Supporting contractors as they construct project funded investments,
- (v) Monitoring compliance with social and environmental safeguards,
- (vi) Providing a channel of access for grievance redress under the project, and
- (vii) Providing routine reports on implementation progress and overall impact.

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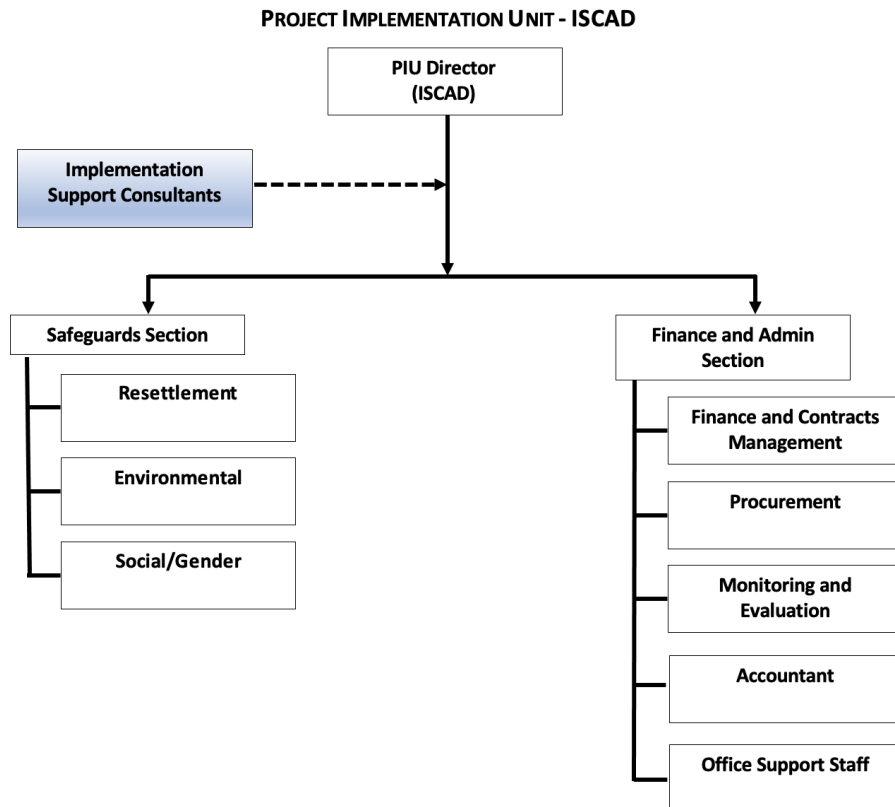
<sup>24</sup> ASO was established in April 2021 as a state unitary enterprise under MOA's Agency for Orchards and Greenhouse Development. Its key mandate is to assist ISCAD in the implementation of the World Bank's Agriculture Modernization Project (\$130 million), especially in administering loans to small-scale farmers. For the proposed PRF, ASO will not be directly involved in daily operations of the vineyards and orchards, which will be managed by private professional horticulture farm operators (para. 16.i).

99. District Coordination Offices will hire a full-time environmental specialist (36 person months).

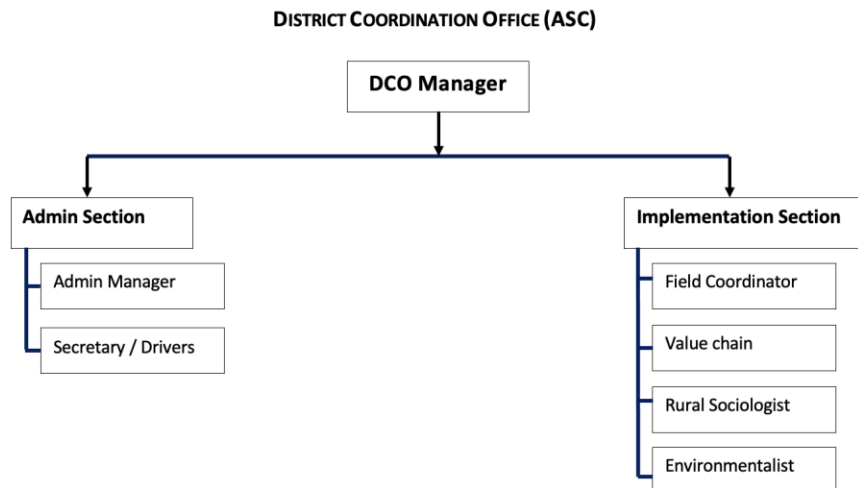
100. The project's organization structure and key staff, together with reporting lines of essential internal structures of the key organizations involved in implementation, is shown in **Figure 2**.



**Figure 1: Project Organizational Structure**



**Figure 3: Structure of Project implementation Unit**



**Figure 4: District Coordination Office**

#### **4. Implementation Support Consultant**

101. The ISC will assist the ISCAD and the ASO to implement project activities to achieve its outputs: (i) Kitob and Bakhmal districts on-farm intensification and expansion activities, (ii) value-chain initiatives in both districts, and (iii) project management. It will work closely with ISCAD's PIU and ASO based in Tashkent and with its FCUs in Bakhmal district (Jizzakh province) and Kitob district (Kashkadarya province).

102. Two types of implementation support will be provided. The first is the more traditional support for implementation progress monitoring, addressing social and environmental safeguards, procurement, financial management, monitoring the release and utilization of loan funds etc. This will be directed at ISCAD's PIU. The second is more technical in nature, involving engineers, agronomists etc. to support the ASO in the implementation of the pilot project. Key aspects of the consultant's work related to environmental aspects will be:

- (i) Support overall implementation of the pilot project,
- (ii) Ensure that social and environmental safeguard requirements are incorporated into all project activities as required by ADB and government,
- (iii) Support the establishment of a grievance redress mechanism developed for the project.

103. The ISC will hire a National Environmental Specialist (NES) for 6 person-months. The duties of this specialist include:

- (i) Ensuring that the detailed design is prepared in line with the IEE/EMP requirements (consideration of High-voltage transmission line requirements.);
- (ii) Assisting ISCAD-PIU to update this IEE if there are any unanticipated impacts or changes in the project design;
- (iii) Assisting the ISCAD-PIU to establish a system to monitor environmental safeguards of the Project;
- (iv) Ensuring that the relevant environmental mitigation measures specified in the EMP cleared by ADB are incorporated into bidding documents prior to the issuance of the bid invitations;
- (v) Providing on-the-job training programs to PIU staff involved in project implementation in order to strengthen their capacity in managing and monitoring environmental safeguards;
- (vi) Supporting ISCAD-PIU in the preparation of semi-annual environmental monitoring reports;
- (vii) Ensuring that the GRM established for the project is in place, is working effectively, and that the proper documentation and support is provided to ensure the speedy redressal of grievances.

#### **5. Contractors**

104. It is anticipated that three contractors will be hired to implement this project:

- (i) Design and Construction Contractor – duration 12 months,
- (ii) Maintenance Contractor – duration 36 months.

105. **Design and Construction Contractor (DCC).** The DCC will be responsible for EMP/SSEMP implementation during the construction phase. Prior to commencing any physical works, SSEMPs including TSEMPs will be developed by the Contractor under the guidance of the ISC and be endorsed by the ISC before submission to the ISCAD PIU for approval. The SSEMP is the document that the Contractors will prepare outlining how they intend to implement the EMP and ensure that all mitigation and monitoring measures are completed according to the implementation arrangements specified in this EMP. SSEMPs will



be needed for major environmental issues and most critical sites relating to sensitive receptors.

106. During the construction phase, each contractor must retain the expertise of environmental engineers and OHSEs to prepare and update the SSEMP and to oversee and report on SSEMP implementation throughout the contract period. The DCC will appoint an environmental, health and safety specialist (6 person-months) who will be responsible for SEMP implementation during the construction period.

## 6. Other Agencies

107. The Kashkadarya branch of the MNR will also be involved in the process of project implementation and further operations. The MNR will review the PEIS and will issue Environmental Appraisals. Based on the results of the national PEIS, a list of mitigation measures and monitoring activities will be indicated in an Environmental Appraisal. The requirements are mandatory for implementation during the construction phase by the project owner. Inspectors from the Kashkadarya branch of the MNR will monitor the implementation of the requirements indicated in the Environmental Appraisal.

**Table 5: Tentative Training Program for Environmental Management**

Type of Training	Content	Training Recipients	Duration of Training	Organizer/ Responsible
<b>Pre-construction Phase</b>				
Preparation of IEE	1. Requirement of ADB SPS (2009) for EA 2. National requirements to EA	PMO/PIUs' managers and safeguards specialists	1 day	Implementation Supervision Consultant (ISC)
<b>Construction Phase</b>				
Introductory training	1. Roles and responsibilities of PIU/contractors/consultants towards protection of environment; 2. Specific Environmental issues during construction; 3. Development of SEMP and OHS Plan; 4. Monitoring of SEMP and OHSP implementation; 5. Reporting requirements; 6. GRM requirements.	Contractors	1.5 days	ISC and DCO's Environmental Specialist
Regular training on EH&S	Training on SEMP and OHSP implementation	Contractors' workers	0.5 day	Contractors implement, ISC and DCO monitors implementation

## VIII. MONITORING AND REPORTING

108. The IA will conduct the monitoring of implementation measures indicated in the EMP. Environmental monitoring shall be carried out the several levels. As contractors will be responsible for implementation of the EMP on construction sites, they will be required to conduct environmental audits on a daily base and submit environmental monitoring reports as part of the monthly progress reports to the PIU. The ISC's environmental specialists will also conduct weekly audits of the construction sites, identify non-compliances, and reflect these

activities in monthly environmental monitoring reports, which will be submitted to the PIUs. Non-compliances observed during site visits, and required corrective actions with timelines for implementation, will be officially submitted to contractors. Contractors will be obligated to mitigate all observed non-compliances and report to the ISC and PIU once mitigated.

109. The PIU will be also be involved in environmental monitoring through the implementation of monthly site visits to verify EMP implementation. PIU safeguards specialists will prepare quarterly reports on environmental performance and will submit them to the IA. The IA environmental specialist, on behalf of the IA, will prepare semi-annual environmental monitoring reports and submit them to the ADB for revision, approval and further publication on the ADB website. After approval, the IA will ensure that EMRs are translated in local languages and published on appropriate websites.

## **A. ATTACHMENTS**

### **Attachment 1: ADB RAPID ENVIRONMENTAL ASSESSMENT CHECKLIST**

## RAPID ENVIRONMENTAL ASSESSMENT (REA) CHECKLIST (IRRIGATION)

### Instructions:

- (i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES) for endorsement by the Director, RSES and for approval by the Chief Compliance Officer.
- (ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.
- (iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

**Country/Project Title:**

**Sector Division:**

Screening Questions	Yes	No	Remarks
<b>A. PROJECT SITING</b>			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
• CULTURAL HERITAGE SITE			
• PROTECTED AREA			
• WETLAND			
• MANGROVE			
• ESTUARINE			
• BUFFER ZONE OF PROTECTED AREA			
• SPECIAL AREA FOR PROTECTING BIODIVERSITY			
<b>B. POTENTIAL ENVIRONMENTAL IMPACTS</b>			
Will the Project cause...			
▪ loss of precious ecological values (e.g. result of encroachment into forests/swamplands or historical/cultural buildings/areas, disruption of hydrology of natural waterways, regional flooding, and drainage hazards)?			
▪ conflicts in water supply rights and related social conflicts?			

Screening Questions	Yes	No	Remarks
▪ impediments to movements of people and animals?			
▪ potential ecological problems due to increased soil erosion and siltation, leading to decreased stream capacity?			
▪ Insufficient drainage leading to salinity intrusion?			
▪ over pumping of groundwater, leading to salinization and ground subsidence?			
▪ impairment of downstream water quality and therefore, impairment of downstream beneficial uses of water?			
▪ dislocation or involuntary resettlement of people?			
▪ potential social conflicts arising from land tenure and land use issues?			
▪ soil erosion before compaction and lining of canals?			
▪ noise from construction equipment?			
▪ dust?			
▪ labor-related social problems especially if workers from different areas are hired?			
▪ waterlogging and soil salinization due to inadequate drainage and farm management?			
▪ leaching of soil nutrients and changes in soil characteristics due to excessive application of irrigation water?			
▪ reduction of downstream water supply during peak seasons?			
▪ soil pollution, polluted farm runoff and groundwater, and public health risks due to excessive application of fertilizers and pesticides?			
▪ soil erosion (furrow, surface)?			
▪ scouring of canals?			
▪ logging of canals by sediments?			
▪ clogging of canals by weeds?			

Screening Questions	Yes	No	Remarks
▪ seawater intrusion into downstream freshwater systems?			
▪ introduction of increase in incidence of waterborne or water related diseases?			

## **Attachment 2: OUTLINE OF AN ADB EIA OR IEE REPORT**

## **OUTLINE OF AN ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

This outline is part of the Safeguard Requirements 1. An environmental assessment report is required for all environment category A and B projects. Its level of detail and comprehensiveness is commensurate with the significance of potential environmental impacts and risks. A typical EIA report contains the following major elements, and an IEE may have a narrower scope depending on the nature of the project. The substantive aspects of this outline will guide the preparation of environmental impact assessment reports, although not necessarily in the order shown.

### **A. EXECUTIVE SUMMARY**

This section describes concisely the critical facts, significant findings, and recommended actions.

### **B. POLICY, LEGAL, AND ADMINISTRATIVE FRAMEWORK**

This section discusses the national and local legal and institutional framework within which the environmental assessment is carried out. It also identifies project-relevant international environmental agreements to which the country is a party.

### **C. DESCRIPTION OF THE PROJECT**

This section describes the proposed project; its major components; and its geographic, ecological, social, and temporal context, including any associated facility required by and for the project (for example, access roads, power plants, water supply, quarries and borrow pits, and spoil disposal). It normally includes drawings and maps showing the project's layout and components, the project site, and the project's area of influence.

### **D. DESCRIPTION OF THE ENVIRONMENT (BASELINE DATA)**

This section describes relevant physical, biological, and socioeconomic conditions within the study area. It also looks at current and proposed development activities within the project's area of influence, including those not directly connected to the project. It indicates the accuracy, reliability, and sources of the data.

### **E. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic (including occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media [Appendix 2, para. 6]), and physical cultural resources in the project's area of influence, in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated; explores opportunities for enhancement; identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specifies topics that do not require further attention; and examines global, transboundary, and cumulative impacts as appropriate.

### **F. ANALYSIS OF ALTERNATIVES**

This section examines alternatives to the proposed project site, technology, design, and operation—including the no project alternative—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their



suitability under local conditions; and their institutional, training, and monitoring requirements. It also states the basis for selecting the particular project design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement.

## **G. INFORMATION DISCLOSURE, CONSULTATION, AND PARTICIPATION**

This section:

- (i) describes the process undertaken during project design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders;
- (ii) summarizes comments and concerns received from affected people and other stakeholders and how these comments have been addressed in project design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and
- (iii) describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during project implementation.

## **H. GRIEVANCE REDRESS MECHANISM**

This section describes the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental performance.

## **I. ENVIRONMENTAL MANAGEMENT PLAN**

This section deals with the set of mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority). It may include multiple management plans and actions. It includes the following key components (with the level of detail commensurate with the project's impacts and risks):

- (i) Mitigation:
  - (a) identifies and summarizes anticipated significant adverse environmental impacts and risks;
  - (b) describes each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required (for instance, continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; and
  - (c) provides links to any other mitigation plans (for example, for involuntary resettlement, Indigenous Peoples, or emergency response) required for the project.
- (ii) Monitoring:
  - (a) describes monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations,

- frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and
  - (b) describes monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.
- (iii) Implementation arrangements:
  - (a) specifies the implementation schedule showing phasing and coordination with overall project implementation;
  - (b) describes institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and
  - (c) estimates capital and recurrent costs and describes sources of funds for implementing the environmental management plan.
- (iv) Performance indicators: describes the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

## **J. Conclusion and Recommendation**

This section provides the conclusions drawn from the assessment and provides recommendations.

## Form for Registration Grievance

### 1. GRIEVANCE LOG

<b>Reference No</b>		
<b>Full Name</b>		
Please mark how you wish to be contacted (mail, telephone, e-mail).	Please mark how you wish to be contacted	
<b>Region/District/Massif</b>		
<b>Date</b>		
<b>Category of the Grievance</b>		
1. On assets/properties impacted by the project		
2. On infrastructure		
3. On decrease or complete loss of sources of income		
4. On environmental issues (exc. pollution)		
5. On employment		
6. On traffic, transportation and other risks		
7. Other (Please specify):		
<b>Description of the Grievance</b> What did happen? When did it happen? Where did it happen? What is the result of the problem?		
<b>What would you like to see happen to resolve the problem?</b>		

**Signature: Date:**

## 2. GRIEVANCE REDRESS PROCESS

Grievance closeout number:	
Define immediate action required:	
Define long term action required (if necessary):	
Compensation Required?	<input type="checkbox"/> YES <input type="checkbox"/> NO
CONTROL OF THE REMEDIATE ACTION AND THE DECISION	
Stages of the Remediate Action	Deadline and Responsible Institutions
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

### COMPENSATION AND FINAL STAGES

This part will be filled and signed by the complainant after s/he receives the compensation fees and his/her complaint has been remediated.

Notes:

Name-Surname and Signature

Date..../...../.....

Of the Complainant:

Representative of the Responsible Institution/Company

Title-Name-Surname and Signature

## Attachment 4: Template of Monthly and Quarterly Reporting of Implementation Support Consultant and Construction Contractor

Project Number: {XXXXXX}  
{Reporting period: Month Year}

{Full Country Name}: {Project Title}  
{(Financed by the <source of funding>)}

Prepared by: {author(s)}  
{Firm name}  
{City, country}

For: {Executing agency}  
      {Implementing agency}

## **TABLE OF CONTENTS**

### **ABBREVIATIONS**

Include list of abbreviations used in the report

## PART I. INTRODUCTION

### 1.1. Preamble

1. This report represents the Monthly Environmental Monitoring Report for INSERT PROJECT NAME.
2. This report is the (insert number of report, i.e. 1<sup>st</sup>, 2<sup>nd</sup> etc) EMR for the project.

### 1.2 Project Description and Current Activities

#### Project Description

3. Provide a brief description of the project (with a map(s)).

#### 1.2.1 Project Contracts and Management

4. Provide a list or table of main organisations involved in the project and relating to Environmental Safeguards. This should include lender, borrower, PIU, Main Contractor/s and significant sub-contractors, environmental staff of various organisations should be named, and contact details provided.
5. Provide a description of responsibilities of environmental specialists of CC, SC and PIU including frequency of inspections and/or monitoring site visits to be conducted by them per month.
6. Provide information related to the changes in project organization and environmental management team took place during the reporting period.

#### 1.2.2. Construction activities and project progress during the reporting period/month

7. Provide an outline of major construction activities which have been carried out during the current reporting period. Provide adequate information so the reader can understand what has been taking place on site. Include photographs (with date stamp) of activities where possible and relevant.
8. Where multiple work sites are involved provide information on which work sites have been active during the current reporting period. Provide map of work site areas if relevant.
9. Provide details (chart) of worker numbers (maximum, minimum) in the current reporting period and anticipated changes in staff in following period.
10. Highlight any significant new activities commenced during the current reporting period.

### 1.3 Description of Any Changes to Project Design

11. Describe any changes to the project design from that which was assessed in the Impact Assessment phase of the project and is set out in the Initial Environmental Examination/Environmental Impact Assessment. If none have taken place, please state – No changes.
12. Note: if significant changes have occurred, SC should inform the PIU and then PIU should inform ADB of this and made a decision on the need for updates to the EIA/IEE and/or SEMP/Environmental Management Plans.

## PART II. ENVIRONMENTAL SAFEGUARD ACTIVITIES

### 2.1. Status of preparation and implementation of Site-Specific and Topic Specific Environmental Management Plans (SEMPs)

13. Please report on delivery of Site-Specific and Topic Specific Environmental Management Plans (SEMPs), required amendments, etc. (table form preferred).

### 2.2. Site monitoring/audit

14. Please provide details (table form preferred) of any **formal** monitoring/audits undertaken by environmental safeguard staff of SC during the current reporting period.
15. Information required includes (table form preferred):
  - Date of site visit(s)
  - Expert's Name along with names of accompanied people
  - Purpose of monitoring/audit
  - Summary of any Significant Findings
16. Summarise findings of monitoring (including non-compliances) undertaken in the reporting period.
17. Provide a copy of all Non-compliance notices (NCN's) for all environmental major Non-Compliances in an annex. If none state this.
18. Please report on timeliness of preparation and implementation of corrective actions/corrective action plan(s) and completion date (table form preferred).

## PART III. RESULTS OF ENVIRONMENTAL MONITORING

### 3.1. Overview of Monitoring Conducted during Current Reporting Period

19. Provide a commentary on what environmental measurements have been undertaken during the current reporting period. Include sub sections for the report on those environmental media which have been measured, for example:
  - Noise
  - Air Quality
  - Water Quality
20. Highlight any areas where agreed monitoring has not taken place.
21. The sections should present highlights of the outcomes of the monitoring focussing on a comparison of the results with the agreed standards as set out in the Specific Environmental Management Plan and/or Monitoring Plan.
21. In particular, make clear where exceedances in the standards have occurred and provide reasons and actions which have been implemented to correct – refer to relevant NCN as appropriate. Recommendations are required to show how any exceedances will be prevented in the future.
23. Detailed monitoring results should be presented as an annex(es).



### **3.1. Summary of Monitoring Outcomes**

#### **3.2.1 Material Resources Utilisation**

24. Provide values (tables, graphs etc) for current reporting period of utilisation of electricity, water and any other materials which have been include in the SEMP for monitoring.

#### **3.2.2. Waste Management**

25. Provide summary of waste management activities during the current period. Provide waste contractors/s names and location of waste sites.

26. Provide breakdown using graphs, table etc, of waste streams during current reporting period. This information should include

- Type of Waste (description and classification – e.g. hazardous – non-hazardous;
- Waste Source – what activity generated the waste and where;
- Quantity of waste generated;
- Treatment/disposal route – provide information on quantities of waste reused, recycled and sent to landfill or incineration; and
- Final disposal sites for waste.

27. Provide commentary on results.

#### **3.2.3. Health and Safety**

#### **Community Health and Safety**

28. Provide information on any incidents which have occurred during the reporting period which resulted in or could have resulted in Community Health and Safety issues. Include within this section traffic accidents.

#### **Worker Safety and Health**

29. Provide detailed statistics on accident rates, including Lost Time Incidents, Accidents and near misses.

30. Provide information on safety campaigns/trainings conducted during the reporting period.

### **3.2. Training**

31. Provide information on all environmental safeguard related training activities undertaken in this reporting period. These may include specific training of environmental staff, HSE inductions of site workers etc.

32. Discuss the need for additional training and what training is planned for coming quarter.

### **3.3. Consultation and complaints**

33. Please report on any consultations undertaken during the reporting period and list any complaints received, in particular when they were received, by whom, how and when they were resolved, etc.

## **PART IV – CONCLUSIONS AND RECOMMENDATIONS**

34. Provide a summary of the effective implementation of Environmental Safeguards during the reporting period.

35. Provide any recommendations for consideration by the ADB for changes to the Environmental Safeguarding process for the project.

36. Provide the list of activities (including non-compliances and corrective actions) to be performed during the next reporting period with deadlines.

## **ANNEXES**

- Provide in annexes monitoring data and photographs prepared during the site visits.

## Attachment 5: Template of Semi-annual Environmental Monitoring Report

Project Number: {XXXXXX}  
 {Reporting period: Month Year}

{Full Country Name}: {Project Title}  
 {(Financed by the <source of funding>)}

Prepared by {author(s)}  
 {Firm name}  
 {City, country}

For {Executing agency}  
 {Implementing agency}

Endorsed by: (staff name of IA/PIU) and signature, submission date

## ABBREVIATIONS

## **1. INTRODUCTION**

### **1.1. Preamble**

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for INSERT PROJECT NAME.
2. This report is the (insert number of report, i.e. 1<sup>st</sup>, 2<sup>nd</sup> etc) EMR for the project.

### **1.2. Headline Information**

3. Include a brief summary of significant outcomes of the project construction process and any specific areas of concern of which ADB should be informed.

## **2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES**

### **2.1. Project Description**

4. Provide a brief description of the project. – this should not vary from one report to the next.

### **2.2. Project Contracts and Management**

5. Provide a list or table of main organisations involved in the project and relating to Environmental Safeguards. This should include lender, borrower, PIU, Main Contractor/s and significant sub-contractors, environmental staff of various organisations should be named, and contact details provided.
6. Provide a description of how the contracts are being managed and names of key personnel.

### **2.3. Project Activities During Current Reporting Period**

7. Provide an outline of major activities which have been carried out during the current reporting period. Provide adequate information so the reader can understand what has been taking place on site. Include photographs (with date stamp) of activities where possible and relevant. Place bulk photographs into an annex to the main report or a separate photographic record.
8. Where multiple work sites are involved provide information on which work sites have been active during the current reporting period. Provide map of work site areas if relevant.
9. Provide details (chart) of worker numbers (maximum, Minimum) in the current reporting period and anticipated changes in staff in following period
10. Highlight any significant new activities commenced during the current reporting period.
11. For the above make maximum use of charts, images and tables.

### **2.4. Description of Any Changes to Project Design**

12. Describe any changes to the project design from that which was assessed in the Impact Assessment phase of the project and is set out in the Initial Environmental Examination/Environmental Impact Assessment. If none have taken place, please state – No changes.
13. Note if significant changes have occurred the PIU should have already informed ADB of this and made a decision on the need for updates to the EIA/IEE and/or Environmental Management Plans

### **2.5. Description of Any Changes to Agreed Construction methods**

14. Provide a description and reason for changes to any construction processes, for example, blasting of rock rather than excavation, open channel rather than thrust boring at road crossings.

## **3. ENVIRONMENTAL SAFEGUARD ACTIVITIES**

### **3.1. General Description of Environmental Safeguard Activities**

15. Please provide a summary of the routine activities undertaken by environmental safeguard staff during the current reporting period. This should include the work undertaken by the contractor's environmental manager, the Environmental Supervisor and any informal visits by the PIU environmental staff.

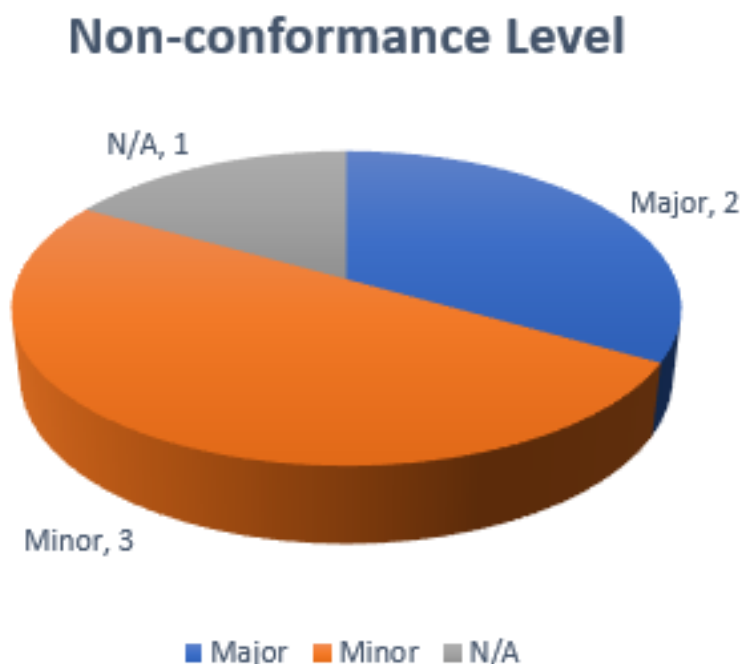
### **3.2 Site Audits**

16. Please provide details (table form preferred) of any **formal** audits undertaken by environmental safeguard process staff during the current reporting period. This would include Contractors Environmental Manager, Environmental Supervisor, PIU Staff and ADB staff during review missions.
  17. Information required includes:
    - Date of Visit
    - Auditors Name
    - Purpose of Audit
    - Summary of any Significant Findings
    - Cross reference to Audit Report which should be included as an annex.
  18. Summarise Findings of Audits under taken in the current period, compare with previous periods and identify any trends or common issues.
- 3.3. Issues Tracking (Based on Non-Conformance Notices)**
19. Provide an overview and description of issues tracked during the current period.
  20. Provide commentary on key statistics based on graphs and tables which can be copied from the Environmental Safeguards Issues Tracing Workbook. For example
- Table A-1 Summary of Issues Tracking Activity for Current Period**

**Summary Table**

<b>Total Number of Issues for Project</b>	6
<b>Number of Open Issues</b>	1
<b>Number of Closed Issues</b>	5
<b>Percentage Closed</b>	17%
<b>Issues Opened This Reporting Period</b>	5
<b>Issues Closed This Reporting Period</b>	4

**Figure A-1 - Summary of Issues by Non-Conformance**



21. Use data from workbook as required.

#### **3.4. Trends**

Use information from previous period reports and the current period information to identify trends in issues. For example -

Quarterly Report No	Total No of Issues	% issues Closed	% issues closed late
1	5	87	0
2	18	56	15
3	59	23	26

22. Provide a commentary on the trends, explain why they may be occurring and in the case of negative trends explain what steps have been taken to make corrections.

23. Provide a copy of all NCN's for all environmental major Non-Conformances in an annex. If none state this.

#### **3.4. Unanticipated Environmental Impacts or Risks**

24. Document any unanticipated environmental impacts and risks which have been identified in the current period (as a reminder, these are impacts or risks which were not identified in the Impact Assessment process). State what actions were taken to mitigate the impacts and risks, were these successful.

### **4. RESULTS OF ENVIRONMENTAL MONITORING**

#### **4.1. Overview of Monitoring Conducted during Current Period**

25. Provide a commentary on what environmental measurements have been undertaken during the current reporting period. Highlight any areas where agreed monitoring has not taken place.

26. Include sub sections for the report on those environmental media which have been measured, for example

- Noise
- Air Quality

- Water Quality
27. The sections should present highlights of the outcomes of the monitoring focussing on a comparison of the results with the agreed standards as set out in the Specific Environmental Management Plan and/or Monitoring Plan.
  28. In particular make clear where exceedances in the standards have occurred and provide reasons and actions which have been implemented to correct – refer to relevant NCN as appropriate.
  29. Detailed monitoring results should be presented as an annex.
- 4.2. Trends**
30. Based on the current and past periods of monitoring identify and discuss any trends which may be developing.
- 4.3. Summary of Monitoring Outcomes**
31. Provide any recommendations on the need for additional monitoring, or requests for ceasing/altering monitoring if activities have been completed or monitoring is showing no significant effects over long period.
- 4.4. Material Resources Utilization**
- 4.4.1. Current Period**
32. Provide values (tables, graphs etc) for current reporting period of utilisation of electricity, water and any other materials which have been include in the SEMP for monitoring.
- 4.4.2 Cumulative Resource Utilization**
33. Provide values (tables, graphs etc) for cumulative resource utilisation of power water etc, for whole project life. Identify trends or significant changes and provide reasons for any such changes.
- 4.5. Waste Management**
34. Provide summary of waste management activities during the current period. Provide waste contractors/s names and location of waste sites.
- 4.5.1. Current Period**
35. Provide breakdown using graphs, table etc, of waste streams during current reporting period. This information should include
    - Type of Waste (description and classification – e.g. hazardous – non-hazardous;
    - Waste Source – what activity generated the waste and where;
    - Quantity of waste generated;
    - Treatment/disposal route – provide information on quantities of waste reused, recycled and sent to landfill or incineration; and
    - Final disposal sites for waste.
  36. Provide commentary on results.
- 4.5.2 Cumulative Waste Generation**
37. Using the above bullet points for waste develop cumulative waste generation results.
  38. Discuss trends and provide suggestions for waste reduction, increase in reuse and recycling if possible.
- 4.6. Health and Safety**
- 4.6.1 Community Health and Safety**
39. Provide information on any incidents which have occurred during the reporting period which resulted in or could have resulted in Community Health and Safety issues. Include within this section traffic accidents.
- 4.6.2 Worker Safety and Health**
40. Provide detailed statistics on accident rates, including Lost Time Incidents, Accidents and near misses.
  41. Provide information on safety campaigns conducted during the reporting period.
- 4.7. Training**



42. Provide information on all environmental safeguard related training activities undertaken in this period and cumulatively for project life to date. These may include specific training of environmental staff, HSE inductions of site workers etc.
43. Discuss the need for additional training and what training is planned for coming quarter.

## **5. FUNCTIONING OF THE SEMP**

### **5.1. SEMP Review**

44. Provide a commentary on the SEMP in terms of the ability of the contractor to implement fully the requirements set out. Highlight any areas where the contractor has not been able to implement mitigation or monitoring measures.
45. Is the SEMP effective, are mitigation measures set out still appropriate and are they working as intended – do they need changing?
46. Are there better alternative mitigation measures?
47. Can some mitigation measures be reduced or removed as the specific risk identified in the IEE/EIA and/or SEMP has not materialised?
48. Provide a table of requests for changes to the current mitigation measures for consideration by ADB. Note you can send these at any time during the project, there is no need to wait until the quarterly reporting period to be completed. If PIU has supplied requests to ADB, these should be listed along with ADB response. Where changes (additions/deletions and modifications) of mitigation or monitoring measures have been approved, the PIU shall ensure that the SEMP is updated to reflect these changes.

## **6. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT**

### **6.1. Good Practice**

49. Provide an overview with charts, images etc of examples of continuing good practice for the project. State why these have been implemented and how they are reducing environmental impacts or risks.

### **6.2. Opportunities for Improvement**

50. Identify any areas which may be outside of the formal NCN process, but which changes to construction techniques, mitigation etc would result in an improvement in environmental, health and safety performance of the project.

## **7. SUMMARY AND RECOMMENDATIONS**

### **7.1. Summary**

51. Provide a summary of the effective implementation of Environmental Safeguards during the reporting period and for the overall project construction period to date.

### **7.2. Recommendations**

52. Provide any recommendations for consideration by the ADB for changes to the Environmental Safeguarding process for the project.

## Attachment 6: Environmental Code of Practice

### INTRODUCTION

The objective of the Environmental Code of Practice (ECP) is to address less significant environmental impacts and general construction related impacts of the proposed project implementation. The ECP will be provided as part of the guidelines for best operating practices and included in the procurement documentation to be followed by the contractors for sustainable management of environmental issues. This ECP will be annexed to the general conditions of all contracts carried out under the project.

The list of ECP requirements for the ADB UZB-9715: Smart Water Management Improvement Project is provided as follows:

- ECP 1: Waste Management
- ECP 2: Fuels and Hazardous Goods Management
- ECP 3: Water Resource Management
- ECP 4: Air Quality Management
- ECP 5: Noise and Vibration Management
- ECP 6: Road Transport and Road Traffic Management
- ECP 7: Construction Camp Management
- ECP 8: Community and Worker's Health and Safety

### ECP 1: Waste Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures /Management
General Waste	Soil and water pollution from the improper management of wastes and excess materials from the construction sites.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Develop a waste management plan for various specific waste streams (e.g., reusable waste, flammable waste, construction debris, food waste etc.) prior to commencing of construction and submit to Project Coordination Unit (PCU) for approval.</li> <li>• Organize the disposal of all wastes generated during construction in an environmentally acceptable manner. This will include consideration of the nature and location of disposal sites to minimize environmental impacts.</li> <li>• Minimize the production of waste materials by utilizing the 3R (Reduce, Recycle and Reuse) approach.</li> <li>• Segregate, reuse or recycle all wastes, wherever practical.</li> <li>• Prohibit the burning of solid waste.</li> <li>• Collect and transport nonhazardous wastes to approved disposal sites. The sites for waste disposal shall be agreed with the local municipal authorities. Specialized companies will be contracted to ensure the collection of domestic and general wastes from camps and temporary storage areas, and transportation to the landfills.</li> </ul>

		<ul style="list-style-type: none"> <li>• Cover vehicles transporting solid waste with tarpaulins or nets to prevent the spillage of wastes.</li> <li>• Provide refuse containers at each worksite.</li> </ul> <p>Train all involved personnel in waste management practices and procedures, emphasizing good housekeeping practices.</p>
Hazardous Waste	Health hazards and environmental impacts due to improper waste management practices	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Collect chemical wastes in 200-liter drums (or similar sealed containers), and appropriately label them for safe transport to an approved chemical waste depot.</li> <li>• Store, transport and handle all chemicals, ensuring to avoid potential environmental pollution.</li> <li>• Store all hazardous wastes in bunded areas away from watercourses.</li> <li>• Make available Material Safety Data Sheets (MSDS) for hazardous materials on site during construction</li> <li>• Collect hydrocarbon wastes, including lube oils, for the safe transport off-site for reuse, recycling, treatment or disposal at storage sites, or alternatively to pass to licensed hazardous waste operators.</li> <li>• Construct concrete or other low hydraulic conductivity flooring to prevent seepage in case of spills.</li> <li>• Ensure all government legislation regarding waste is being followed, including the provision of a waste inventory to government and a Waste Management Plan.</li> </ul>

## ECP 2: Fuels and Hazardous Goods Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures /Management
Fuels and hazardous goods	Materials used in construction have a potential to be a source of contamination. Improper storage and handling of fuels, lubricants, chemicals and hazardous goods/materials on-site, and potential spills from these goods may harm the environment or health of construction workers.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Prepare spill control procedures and submit the plan for approval.</li> <li>• Train the relevant construction personnel in fuels handling and spill control procedures.</li> <li>• Store dangerous goods in bunded areas on top of sealed plastic sheets, and at a minimum distance of 100 meters from watercourses.</li> <li>• Ensure that all refueling operations on working sites use absorbent pads and/or straw to minimize spills, which will be put in place prior to the commencement of refueling operations.</li> <li>• Reduce groundwater and surface water pollution risks and immediately remove any pollution.</li> <li>• Remove, store and treat as hazardous wastes, any soils and absorbents.</li> <li>• Cease works and inform responsible persons in the case of significant spills, with works only recommencing after the elimination of pollution risks.</li> <li>• Implement refueling operations only with the correct equipment (i.e. nozzles of the appropriate size), and only with suitably trained and experienced refueling operators.</li> <li>• Provide personal protective equipment for appropriate personnel, including clothing, safety boots, helmets, masks, gloves, and goggles.</li> </ul>

### ECP 3: Water Resource Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures /Management
Hazardous materials and water	Water pollution from the storage, handling and disposal of hazardous materials and general construction waste, and accidental spillage.	The Contractor shall: <ul style="list-style-type: none"><li>• Follow the management guidelines.</li><li>• Minimize the generation of sediment, oil and grease, excess nutrients, organic matter, litter, debris and any form of waste (particularly petroleum and chemical wastes). These substances must not enter waterways, storm water systems or underground aquifers.</li></ul>
Discharge from construction sites	During construction, both surface and groundwater quality may deteriorate due to sewage from construction sites and work camps.	The Contractor shall: <ul style="list-style-type: none"><li>• Install temporary sediment basins, where appropriate, to capture sediment laden run-off from sites.</li><li>• Stockpile materials away from drainage lines.</li><li>• Prevent all solid and liquid wastes entering waterways by collecting solid waste, oils, chemicals, bitumen spray waste and wastewater from brick, concrete and asphalt cutting where possible and transport to an approved waste disposal site or recycling depot.</li><li>• Wash out ready-mix concrete agitators and concrete handling equipment at washing facilities off site or into approved bunded areas on site.</li><li>• Ensure that tires of construction vehicles are cleaned in washing bays (constructed at the entrance of the construction sites) to remove the mud from the wheels. This should be done for every exit of each construction vehicle.</li></ul>

**ECP 4: Air Quality Management**

<b>Project Activity/ Impact Source</b>	<b>Environmental Impacts</b>	<b>Mitigation Measures /Management</b>
Construction vehicular traffic	Air quality can be adversely affected by vehicle exhaust emissions and combustion of fuels.	<p>The Contractor should</p> <ul style="list-style-type: none"> <li>• Fit vehicles with appropriate exhaust systems and emission control devices. Maintain these devices in good working condition.</li> <li>• Operate the vehicles in a fuel-efficient manner.</li> <li>• Cover haul vehicles carrying dusty materials (for example, cement) moving outside the construction site.</li> <li>• Impose speed limits on all vehicle movements at the worksite to reduce dust emissions.</li> <li>• Control the movement of construction traffic.</li> <li>• Service all vehicles regularly to minimize emissions.</li> <li>• Transport materials to sites in off-peak hours where possible.</li> </ul>
Construction machinery	Air quality can be adversely affected by vehicle exhaust emissions and the combustion of fuels.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Fit machinery with appropriate exhaust systems and emission control devices. Maintain these devices in good working condition in accordance with the specifications defined by their manufacturers to maximize combustion efficiency and minimize contaminant emissions. Proof of maintenance shall be required by the equipment suppliers and contractors/ subcontractors</li> <li>• Provide filtering systems, duct collectors or humidification or other techniques (as applicable) to the concrete batching and mixing plants to control particle emissions in all stages, including unloading, collection, aggregate handling, cement dumping, and the circulation of trucks and machinery inside the installations.</li> </ul>
Construction activities	Dust generation from construction sites, material stockpiles and access roads impacts on the environment and can be a health hazard.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Water material stockpiles and access roads on an as-required basis to minimize the potential for environmental nuisance due to dust.</li> <li>• Restore disturbed areas as soon as practicable by vegetation/grass-turfing.</li> <li>• Establish adequate locations for the storage, mixing and loading of construction materials, in a way that dust dispersion is prevented because of such operations.</li> </ul>

## ECP 5: Noise and Vibration Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures /Management
Construction vehicular traffic	Noise quality will deteriorate due to vehicular traffic..	The Contractor shall: <ul style="list-style-type: none"><li>• Maintain all vehicles in good working order in accordance with manufacture maintenance procedures.</li><li>• Ensure that all drivers comply with traffic codes, including maximum speed limits and maximum driving hours.</li><li>• Organize the loading and unloading of trucks, and handling operations for the purpose of minimizing construction noise on work sites.</li></ul>
Construction machinery	Noise and vibration may have an impact on people and property.	The contractor shall: <ul style="list-style-type: none"><li>• Appropriately site all noise generating activities to avoid noise pollution to local residents.</li><li>• Maintain all equipment in good working order in accordance with manufacture maintenance procedures. Equipment suppliers and contractors shall present proof of maintenance of their equipment.</li><li>• Install acoustic enclosures around generators to reduce noise levels as appropriate.</li><li>• Fit high efficiency mufflers to appropriate construction equipment.</li></ul>
Construction activity	Noise and vibration may have an impact on people and property.	The Contractor shall: <ul style="list-style-type: none"><li>• Notify adjacent landholders prior to any typical noise events outside of daylight hours.</li><li>• Employ best available work practices on-site to minimize occupational noise levels.</li><li>• Install temporary noise control barriers where appropriate.</li><li>• Notify affected people if major noisy activities will be undertaken e.g. unloading.</li><li>• Plan activities on site and deliveries to and from site to minimize impacts.</li><li>• Monitor and analyze noise and vibration results, and adjust construction practices as required.</li><li>• Ensure access and egress is done in a way to avoid noise to local residents.</li></ul>

**ECP 6: Road Transport and Road Traffic Management**

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures /Management
Construction vehicular traffic	Increased traffic use of road by construction vehicles will affect the movement of normal road traffic and the safety of the road-users.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Prepare and submit a traffic management plan covering delivery of oversized loads, delivery of other sites material and waste management for approval before commencing work on any project component involved in traffic diversion and management.</li> <li>• Ensure that the traffic management plan maintains uninterrupted traffic movements during construction.</li> <li>• Provide signs at strategic locations of the roads.</li> <li>• Install and maintain a display board at each important road intersection on the roads to be used during delivery of oversized loads, which shall clearly show the following information: <ul style="list-style-type: none"> <li>• Location: street name.</li> <li>• Date of delivery of oversized load.</li> <li>• Suggested detour route map.</li> <li>• Name and contact address/telephone number of the Contractor.</li> </ul> </li> </ul>
	Accidents and spillage of fuels and chemicals.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Restrict the transport of oversize loads.</li> <li>• Operate road traffic/transport vehicles, if possible during nonpeak periods to minimize traffic disruptions.</li> <li>• Design and implement safety measures and an emergency plan to contain damages from accidental spills.</li> <li>• Designate special routes for hazardous materials transport, as necessary.</li> </ul>



## ECP 7: Construction Camp Management

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures /Management
Siting and location of construction camp (if applicable)	Construction camps are important locations that can have significant impacts such as health and safety hazards on local resources and infrastructure of nearby communities	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Locate construction camps at areas which are acceptable from an environmental, cultural and social point of view.</li> <li>• Consider the location of construction camps away from communities to avoid potential social conflicts in using the natural resources such as water, or to avoid possible adverse impacts of the construction camps on the surrounding communities.</li> <li>• Submit for approval a detailed layout plan for the development of each construction camp showing the relative locations of all temporary buildings and facilities that are to be constructed, together with the locations of site roads, fuel storage areas (for use in power supply generators), solid waste management and dumping locations, and drainage facilities, prior to the development of the construction camps.</li> <li>• Ensure that local authorities shall be informed of the establishment of camp facilities so as to maintain effective surveillance over public health, social and security matters.</li> </ul>
Construction camp facilities.	Lack of proper infrastructure facilities, such as housing, water supply and sanitation facilities, will increase pressure on the local services and generate substandard living standards and health hazards.	<p>The Contractor shall provide the following facilities in the campsites:</p> <ul style="list-style-type: none"> <li>• Adequate temporary housing provision with required facilities for workers.</li> <li>• Safe and reliable water supplies.</li> <li>• Hygienic sanitary facilities and sewerage systems.</li> <li>• Treatment facilities for sewerage of toilet and domestic wastes.</li> <li>• Storm water drainage facilities.</li> <li>• In-house community/common entertainment facilities, which however discourages local entertainment outlets where possible.</li> </ul>
Disposal of waste.	Management of wastes is crucial to minimize impacts on the environment.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Ensure proper collection and disposal of solid wastes within the construction camps.</li> <li>• Store inorganic wastes in a safe place within the household and clear organic wastes on daily basis to waste collectors.</li> <li>• Establish waste collection, transportation and disposal systems with the human resources, equipment and vehicles required.</li> <li>• Ensure that all solid waste will be collected and removed from the work</li> </ul>

		camps and disposed in approved disposal sites.
Health and hygiene.	Health issues from workers could spread diseases to local communities or place a burden on local health care systems.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Provide adequate health care facilities within construction sites.</li> <li>• Provide 24-hour first aid facilities and maintain medicine stocks.</li> <li>• Provide ambulance facilities for laborers during emergencies.</li> <li>• Implement health screening of laborers coming from outside areas.</li> <li>• Train construction workers in basic sanitation and health care issues and safety matters, and on the specific hazards of their work.</li> <li>• Provide HIV awareness programming, including STI (sexually transmitted infections)</li> <li>• And HIV information, education and communication for all workers on regular basis</li> <li>• Provide adequate drainage facilities throughout the camps to ensure that disease vectors such as stagnant water bodies and puddles do not form.</li> <li>• Carryout short training sessions on best hygiene practices to be mandatorily participated by all workers. Place display boards at strategic locations within camps containing messages on best hygienic practices.</li> </ul>
Safety	Inadequate safety facilities in construction camps may create security problems and fire hazards.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Provide appropriate security personnel (police / home guard or private security guards) and enclosures to prevent unauthorized entry into camp areas.</li> <li>• Maintain a register of persons present in the camp at any given time.</li> <li>• Encourage use of flame proof material for the construction of labor housing / site offices, and ensure that these houses/rooms are of sound construction and capable of withstanding high winds and storms.</li> <li>• Provide appropriate types of firefighting equipment suitable for the construction camps.</li> <li>• Display emergency contact numbers clearly and prominently at strategic places in camps.</li> <li>• Communicate the roles and responsibilities of laborers in case of emergencies in the monthly meetings with contractors.</li> </ul>
Site Restoration	Restoration of the construction camps to original condition requires demolition of construction camps.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Dismantle and remove from the site all facilities established within the construction camp including the perimeter fence and lockable gates at the completion of the construction work.</li> </ul>

[Subject]  
[Title]

		<ul style="list-style-type: none"><li>• Dismantle camps in phases.</li><li>• Give prior notice to laborers before demolishing their camps/units.</li><li>• Maintain noise levels within prescribed standards during demolition activities.</li><li>• Hire specific contractors as necessary to demolish different structures to promote recycling or reuse of demolished material.</li><li>• Reuse demolition debris to the maximum extent possible and dispose of debris at designated waste disposal sites.</li><li>• Restore sites to their original condition prior to project operations or to agreed conditions with landowners.</li></ul>
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**ECP 8: Community and Worker's Health and Safety**

Project Activity/ Impact Source	Environmental Impacts	Mitigation Measures /Management
Best Practices	Construction works may pose health and safety risks to surrounding communities, construction workers, and site visitors, leading to severe injuries and death. The construction workers and to a lesser extent, the local community, will be exposed to a number of (i) biophysical health risk factors, (e.g. noise, dust, chemicals, construction material, solid waste, waste water, vector transmitted diseases etc), and (ii) risk factors resulting from human behavior (e.g. STD, HIV etc) and (iii) road accidents from construction traffic.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Implement suitable safety standards for all workers and site visitors which should not be less than international standards (e.g. International Labor Office guideline on 'Safety and Health in Construction; World Bank Group's 'Environmental Health and Safety General Guidelines, 2007') and the contractor's own national standards or statutory regulations,</li> <li>• Provide the workers with a safe and healthy work environment, taking into account inherent risks in its particular construction activity and specific classes of hazards in the work areas.</li> <li>• Provide personal protection equipment (PPE) for workers, such as safety boots, helmets, masks, gloves, protective clothing, goggles, full-face eye shields, and ear protection.</li> <li>• Maintain the PPE properly.</li> <li>• Implement safety procedures, including the provision of information, training and protective clothing to workers involved in hazardous operations.</li> <li>• Appoint an environmental, health and safety manager to look after the health and safety of the workers.</li> <li>• Inform communities through local authorities responsible for health, religious and security duly informed before the commencement of civil works and the establishment of construction camps so as to maintain effective surveillance over public health, social and security matters.</li> <li>• Ensure a Grievance Redress Mechanism (GRM) is in place and operational.</li> </ul>
Accidents	Lack of first aid facilities and health care facilities in the immediate vicinity will aggravate the health conditions of victims.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Provide appropriately equipped first-aid stations and health care facilities to be easily accessible throughout the place of work and at construction camps.</li> <li>• Document and report occupational accidents, diseases, and incidents, and keep statistics so that trends can be seen and preventative action taken where needed.</li> <li>• Prevent accidents, injury, and diseases arising from, associated with, or occurring in the course of work by minimizing, so far as reasonably practicable, the causes of hazards in a</li> </ul>

		<p>manner consistent with good international industry practice.</p> <ul style="list-style-type: none"> <li>• Identify potential hazards to workers, particularly those that may be life-threatening and provide necessary preventive and protective measures.</li> <li>• Provide awareness training to construction drivers to strictly follow the driving rules.</li> <li>• Provide adequate lighting in construction areas, along access routes, in camps, and along access roads (as needed).</li> </ul>
Construction Camps	Lack of proper infrastructure facilities, such as housing, water supply and sanitation facilities will increase pressure on the local services and generate substandard living standards and health hazards	<p>The Contractor shall provide the following facilities in the campsites to improve health and hygienic conditions:</p> <ul style="list-style-type: none"> <li>• Adequate ventilation facilities.</li> <li>• Safe and reliable water supplies.</li> <li>• Hygienic sanitary facilities and sewerage systems.</li> <li>• Storm water drainage facilities.</li> <li>• Recreational and social facilities.</li> <li>• Safe storage facilities for petroleum and other chemicals.</li> <li>• Solid waste collection and disposal systems.</li> <li>• Training.</li> <li>• Security fences.</li> <li>• A sick bay and first aid facilities.</li> </ul>
Water and sanitation facilities at the construction sites	Lack of water and sanitation facilities at construction sites cause inconvenience to the construction workers and affect their personal hygiene.	<p>The contractor should provide:</p> <ul style="list-style-type: none"> <li>• Portable toilets at the construction sites and drinking water facilities. These portable toilets should be cleaned once a day and all the sewerage should be pumped from the collection tank once a day and should be brought to the common septic tank for further treatment.</li> </ul>
Night Working	Lack of night-specific health and safety measures could put the safety of workers at risk.	<p>The contractor should provide:</p> <ul style="list-style-type: none"> <li>• Fixed lighting for all construction areas and access routes.</li> <li>• Spare battery-operated lighting for all staff in case of emergency.</li> <li>• The operation of a 'buddy system' as far as possible where staff work in pairs.</li> <li>• Provision of all staff with mobile communication devices.</li> <li>• A sign in and sign out system to ensure that all staff leave the site at the end of each shift and nobody is left behind.</li> <li>• Specific training for night working.</li> </ul>
Training	Lack of awareness and basic knowledge of health care among affected communities and construction workforce, making them susceptible to potential diseases.	<p>The Contractor shall:</p> <ul style="list-style-type: none"> <li>• Provide general training for all staff that consists of basic hazard awareness, site specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disasters, as appropriate.</li> </ul>

		<ul style="list-style-type: none"> <li>• Safety awareness training for local communities to increase construction specific and general safety awareness amongst the local communities, as appropriate.</li> <li>• Train construction workers in basic sanitation and health care issues (e.g., how to avoid transmission of sexually transmitted infections (STI) HIV/AIDS.</li> <li>• Train all construction workers on the specific hazards in relation to their work.</li> </ul>
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