1. BACKGROUND

The Republic of Uzbekistan (the “RoU”) is a water-stressed country vulnerable to the impacts of climate change. Water productivity is among the lowest in the world. The irrigation water conveyance (“IWC”) infrastructure in the country, built in the 1950-80s, is dilapidated and needs modernisation and rehabilitation as well as adaptation to climate change. High population growth and rapid economic development are expected to further exacerbate water scarcity.

While water stress is increasing, millions of people in the RoU still depend directly on irrigated agriculture, a vital sector of the country’s economy. Entire communities, particularly those living in rural areas, depend on IWC infrastructure for a reliable water supply, without which their incomes and livelihoods would be in jeopardy.

In February 2018, the Ministry of Water Resources (the “Ministry”) was established to improve management of the country’s water resources and modernise IWC infrastructure. The Ministry is responsible for the operation of the country’s IWC infrastructure and overall implementation of the government’s vision for the sector.

The IWC infrastructure includes water intake facilities, pumping stations and main and small water conveyance canals that supply water to the farm-level systems. It is managed by the Ministry through 13 regional departments, each of which operates and maintains its own irrigation cluster. The Ministry also controls, among others, several state unitary enterprises responsible for production and repair of IWC equipment, a design institute and a consultancy responsible for construction supervision.

The main users of water resources are Water Consumer Associations (“WCAs”), which mainly consist of larger farming enterprises with 100-200 ha of land and smaller “dekhkan” enterprises with less than one ha of land each. WCAs are not charged for the water used, but are obliged to comply with the established limits of water intake set by the Ministry. All operating and maintenance costs are covered by the government. The IWC infrastructure services 4.6 million ha of arable land utilising nearly 2,000 pumping stations, over half of which have been in use for more than 30 years.

The Ministry has approached the European Bank for Reconstruction and Development (“EBRD” or the “Bank”) with a request to finance modernisation of around 240 pumping stations used for IWC across the country and ancillary IWC infrastructure (the “Project”). The Project is not expected to lead to increased water consumption. A December 2018 government decree refers to the Project as a key element for the improvement of water resource management in the RoU. EBRD has agreed to consider a loan to the RoU to finance the capex programme.
2. **OBJECTIVES**

The Bank wishes to commission a suitably qualified consultant (the “**Consultant**”) to prepare a comprehensive feasibility study (“**FS**”) to assess the water resource management in RoU and to determine a priority investment programme worth approximately USD 400 million (the “**PIP**”), consisting of two phases, USD 200 million each. In parallel the Consultant will conduct Environmental and Social Audit and Assessment to evaluate the PIPs impacts and benefits, including assessing its environmental and social feasibility and sustainability. The Consultant will also identify inefficiencies in the sector regulation, where reforms are required.

The overall objective of the assignment is to provide detailed information so that the Bank could appraise and structure the Project and take a decision on the prospective financing.

The Consultant’s specific tasks will include, *inter alia*:

- Perform a water resource and demand assessment, taking into account expected changes (including availability, amounts, characterisation, sources, quality, and impact of the Project on water resources, impacts of climate change, impact of ongoing liberalisation of cotton production).
- Review the present and planned reconstruction of irrigation pumping stations in the Republic of Uzbekistan and confirm the Project’s economic rationale, taking into account the water resources, water consumers, potential introduction of tariffs and other water initiatives at the basin level.
- Based on satellite imagery and other available data, identify critical sections of water irrigation network which are cost efficient to rehabilitate, repair or replace to reduce substantive water losses/energy consumed.
- Assess whether the Project is technically sound and sustainable, and whether the proposed investments are the most effective, least cost investment programme.
- Formulate the PIP for the identified measures. This shall include an assessment of its economic, social, environmental and water-/energy-efficiency benefits, using appropriate benchmarks as set out below.
- Conduct Environmental and Social Audit and Assessment of the existing facilities and operations and environmental and social conditions relevant to the Project.
- Provide inputs for a financial model that would enable the Bank to calculate EIRR and other relevant indicators.
- Determine an efficient implementation strategy for the PIP and assess procurement options for the effective delivery of investment solutions. Propose options to group the Project’s components into [five] sub-projects and rank them in order of priority.
- Review and describe the implementation arrangements, and assess the implementation capacity of the RoU, in line with EBRD’s Procurement Policies and Rules and identify potential gaps and the support needed.
- Conduct institutional assessment of the sector to identify options for the Bank to engage in policy dialogue, ensuring that synergies are achieved with on-going and planned activities of the EBRD and other IFIs in the country, including but not limited to: a) the design of an efficient and regional asset and water resource management mechanism, b) basin management approach, c) tariff setting mechanisms, d) consolidation of WCAs, etc. The Consultant should also provide international best practice examples for establishing an enhanced institutional setup in the irrigation sector and suggest a policy roadmap.
- Explore options for local deployment of renewables such as solar photovoltaics to augment energy supplies (where viable).
• Assess the potential impact of this investment on men and women users of the water services to be provided and, specifically, the extent to which this investment will not exacerbate existing gender inequalities but will rather help reduce gender gaps.
• Calculate EBRD’s standard measuring indicators and Green Economy Transition (GET) impact indicators (Annex 1).
• To the extent possible, the FS should:
  o Take into account the potential impacts of climate change on the project in order to build in resilience to climate change related risks;
  o Assess the resource efficiency opportunities (including energy and water efficiency and the impact on GHG emissions) on the Project
  o Assess current supply of irrigated land in the RoU (in ha) and provide assessment of its exposure to climate change risks and reliability of irrigation water supply (by regions or other suitable geographic aggregation)

3. SCOPE OF WORK

In order to meet the assignment objectives, the Consultant will undertake the following tasks:

3.1 Baseline Study
3.2 Technical Assessment
3.3 Identify priority upgrade measures and related PIP
3.4 Financial
3.5 Business Model for Recovering Investment Costs
3.6 Environmental and Social Audit and Assessment
3.7 Local Feasibility Study and designs

3.1. Baseline Study

The following will, inter alia, be addressed:

3.1.1. Agriculture & Water Use

Based on historical data and information readily available, the Consultant will compile and present information describing and setting the baseline for current agricultural practices and water use in the agriculture sector, including:

• Nature and socio-economic background, and the role of irrigation and agriculture water management.
• Status of irrigation and agriculture water management sector, including physical scope, infrastructure conditions, energy subsidies impacting costs for using irrigation water, technical level and institutional settings.
• Market potential and agribusiness models of local-advantage value chains, and their demands for irrigation and agriculture water management services, including the expected changes due to the ongoing liberalisation of cotton production.
• Present analysis of land use and how much land is currently irrigated (and how the situation has changed over the last 20-30 years, and the forecast future use).
• Review the agricultural water distribution and irrigation patterns, land and water availability in terms of quantity and quality, adequacy and suitability of drainage systems and structures.
• Irrigation-induced environmental issues, especially soil salinity, surface water over-withdrawals, groundwater depletion.
3.1.2. Socio-Economic Data & Gender

Based on 3-5 years of historical data and information readily available, the Consultant will compile and present socio-economic data relevant to irrigation operations in the RoU, *inter alia*:

- Present analysis on population, including historical development (the number of people, general spatial distribution, in and out migration, minority and vulnerable groups, etc. with sex-disaggregated data), trends, growth rates, and review of proposed municipal development plans to obtain basis for population projections.

- Compile and present sex disaggregated data on irrigation user’s types of economic activities (and relevance of irrigation to these), incomes and expenditures, asset ownership (specifically, agricultural land), participation and decision-making in WCAs, number of breadwinners, average expenditures for essential goods and health care, educational levels, profile and geographic distribution of poverty, occurrence of water related diseases, people living with disabilities, and other data needed to identify respective needs and concerns of different disadvantaged groups and/or those with less voice, such as women, to be addressed in the design, implementation, and monitoring and evaluation of the Project, with the data disaggregated by sex where possible.

- Review the agricultural water distribution and irrigation patterns, women’s participation in the decision-making process, how the information on irrigation turns is equally accessible to men and women farmers, whether physical strength is required to handle it (which in turn would require technology adaptation, degree of knowledge and training to meet women’s needs), whether all irrigators can directly request water for irrigation or use it only when it is their turn and, finally, in case of water shortages, how is the available water shared between users. As for irrigation patterns, how much time do men and women respectively dedicate to irrigating the field (break-down by type of irrigation).

- Identify the needs and challenges women farmers face in operating irrigation equipment, as well as the level of knowledge with regards to efficient production and water use. Identify current levels of access to existing training and capacity building activities, additional training needs of women and men farmers and staff in irrigation management and associated practices, for instance in installation and repair of irrigation infrastructure.

- Compile and present sex-disaggregated data on the current level of usage and yield of the land targeted by the Project.

- Assess to what extent land is currently under-used or not used due to lack of / inadequate quality of irrigation and how this would improve as a result of the Project, including the associated increase in earnings / economic opportunities.

**Gender Baseline**

- The Consultant shall make an assessment of current gender gaps in the RoU, the current status of men and women’s land ownership in the areas of operation, their agricultural and other income-generating activities, entrepreneurship, their decision-making capacity and effective participation in WCAs.

- The Consultant shall assess the current status of service planning and provision with respect to men and women’s different needs through the review of quantitative and qualitative data supplied by the Client so as to identify potential issues, opportunities and questions to explore regarding the planned investment and associated gender impacts.

- The Consultant shall aim to gain in-depth understanding of ‘gender’ issues and identify potential policy dialogue activities on gender. Data (both quantitative and qualitative) will be collected on the thematic areas listed below.

**Access to Land Ownership and Agricultural Economic Activities**
• Define the structure of WCAs and their institutional setup and governance structure.
• Define the existing types of land tenure, the average size of farms owned, the household members owning the land, the percentage of farmers who do not own the farm they land, all data disaggregated by gender.
• Analyse men and women farmers’ economic activities and their participation in agricultural cooperatives, access to inputs (credit facilities, seeds, fertilisers, training etc.), markets and agricultural extension services provided by public and/or private stakeholders.
• Identify who currently has and who will have the right to irrigate after project implementation, whether this right is currently connected to plot registration, who the end water users are and who can decide on the use and management of water resources (data collection disaggregated by sex, age groups, minority groups, socio-economic status, etc.)
• Define the connection between water rights and land ownership, identify whether land ownership and inheritance are regulated by existing laws and regulations or through customary traditions or by a combination of both, specifically how these are applied, whether there are differences between women and men and what dispute resolution mechanisms are in place to handle land disputes.
• Define existing irrigation systems and whether there are “family plots” registered in the name of both husband and wife, and if not, what is the percentage of plots registered in the name of women. Report on what happens in case the registered plot holder is absent, gets divorced or dies and whether there are significant differences between men and women.

The Consultant shall make an assessment of women’s representation in WCAs in the RoU and try to identify any potential formal/informal restrictions on female membership of WCAs, such as social norms, formal membership requirements (for instance land ownership), limited access to information etc. The Consultant shall make an assessment of women’s decision-making capacity and effective participation in WCAs in the RoU and shall present recommendations to the EBRD and the Client on issues that could be a hindrance to enhancing women’s economic opportunities under the scheme.

This part of the assessment shall focus on (but shall not be restricted to) the following issues:
• Define the water management organizations in place, whether they are adequate for promoting women farmers’ participation in the decision-making processes.
• Define women and men’s preferences in timing and duration of the irrigation.
• Review the membership criteria to WCAs, specifically whether more than one member per plot can be registered, under which name can women be registered even if they are actually members themselves, whether it includes all water users (tenants, sharecroppers, women working the land owned by their husbands, etc.) and if not, whether there are groups that are not represented in the membership of the WCAs. Specific attention needs to be paid on who can take part in the decision-making processes in the WCA, be it registered members only, or all water users, or all involved stakeholders.
• Review the organizational arrangements of WCAs meetings, specifically whether meetings take place at a time convenient for both men and women, whether a replacement can be sent to meetings where decision-making takes place
• Review the election criteria for Board Membership to WCAs, especially the requirements set. In addition, it should be documented whether there are men and women selected as the Chair, Secretary and Treasurer of the WCA and whether there is an imbalance between men and women compared to the ratio of those using water
• Identify the needs and challenges women farmers face in operating irrigation equipment, as well as the lack of knowledge with regards to efficient production and water use.
Identify training needs of women and men farmers and staff in irrigation management and associated practices, for instance in installation and repair of irrigation infrastructure.

3.1.3. Organisational and institutional review

Taking into account available information the Consultant will describe the organisation and management of the systems operated by the WCAs in the RoU and the associated legal framework. More specifically, the Consultant’s report will include comprehensive information as detailed below:

- Review all relevant national policies and strategic documents relating to water, land, farming and irrigation (current as well as upcoming ones).
- Describe in detail the WCAs set-up and assess the technical and E&S support required to build their capacity, including on climate resilience and ESAP implementation. Assess the need for development of a capacity building plan for WCAs.
- Describe the existing and prospective contractual arrangements between the Ministry and the WCAs, relevant to the Project.
- Describe the involvement of private parties (WCAs, farming enterprises, dekhkan enterprises, etc.) in the irrigation sector supply side in terms of asset ownership, long-term planning, capital investments and operational/management rights. Compare the current situation in the RoU with best international practices in the OECD countries. Propose measures of private sector involvement and asset consolidation based on international best practices (where applicable), including potential for higher private sector participation.
- Describe the current asset management practices in the sector; identify an efficient asset and resource management structure to provide efficiency and governance gains as well as to contribute to better asset and resource conservation, that would be applicable given the country context.
- Review existing and recently conducted IFI-led irrigation-related projects in the RoU, their progress and the policy agenda attached to them.
- Identify shortcomings of the current organisational/institutional framework and make recommendations on how to enhance them through a structured policy dialogue initiative in the short and medium term. Provide assessment of the current situation, identify short comings for different aspects of governance (including but not limited to regulations, management structures in the sector and web of stakeholder relations, financial relations, responsibility and accountability schemes, etc.). Review international best practice.
- Identify shortcomings of the current sector organization and governance structure, and propose improvements and restructuring measures feasible in the short- and medium-term. Specifically, the Consultant should:
  - Review and summarise international experience and best practices in operations and management of irrigation infrastructure.
  - Based on the international best practice, assess feasibility of 1) unbundling of the Ministry’s functions of a sector regulator from its business operations and 2) the establishment of a separate entity responsible for operations of irrigation infrastructure.
  - Evaluate whether a reorganisation will lead to improved operational and economic efficiency and will facilitate private investments in the sector.
  - If the reorganisation is recommended, prepare an Action Plan the timeline for the potential reorganisation.

3.1.4. Tariff Introduction, Setting and Subsidy Payment Policy
The absence of fees for irrigation services is a fundamental issue. The long term feasibility of the Project is partially reliant upon: (i) a tariff introduction and adjustments, tariff setting formula/methodology that allows for the recovery of all recurrent costs including capital investment costs and (ii) adequate billing and collection practices. The Consultant will, inter alia:

- Describe the current practices for compliance of the WCAs with the established water intake limits set by the Ministry, including enforcement/control mechanisms available to the Ministry.
- Evaluate feasibility of introduction of tariffs for irrigation water consumption, propose tariff-setting methodology for irrigation services and compare to international best practices.
- Estimate the required tariff to make the irrigation system financially sustainable – (i) by covering operating and maintenance costs and (ii) covering operating, maintenance and all capital costs if and where feasible.
- Describe the potential billing and collection methodologies, as well as user databases, and practices by consumer groups and provide an opinion to the Bank regarding suitable approaches applicable in the country context, in accordance with industry best practices. Evaluate this in the context of farm-level economic data and experiences in similar countries, in order to draw conclusions on water pricing for farmers and their willingness to pay.
- If present:
  - Identify any cross subsidies and provide potential alternatives for the orderly phasing-out of cross-subsidies, ensuring that consumer tariffs remain affordable.
  - Evaluate the degree of receivables by consumer groups and suggest the solutions to reduce them if necessary.
- Identify the timeline for the introduction of a proper tariff/subsidy policy for the Project (with specific timing).

### 3.1.5. Resilience to climate change

The Baseline Study should take account current climatic conditions and projected climate change. In particular, the Consultant shall assess the implications of climate change that are relevant to IWC services and infrastructure (including associated facilities such as dams), which may include, but not be limited to, the following:

- Rising temperatures leading to the melting of glaciers and consequent impact of river systems, flows and water quality;
- Adequacy of and changes in water availability and its supply (both surface water and groundwater);
- Power supply, energy availability and energy costs;
- Asset protection and maintenance; and
- Water demand and changes in demand (e.g. increased demand due to more extreme heat days).

In conducting this analysis and other climate resilience tasks set out elsewhere in these Terms of Reference, the Consultant shall use as a methodological guide the Technical Note entitled “Integrating Climate Change Information and Adaptation in Project Development”, which has been developed by EBRD and other financing institutions belonging to the European Financing Institutions Working Group on Adaptation to Climate Change (EUFIWACC). The EUFIWACC Technical Note can be found using this link. The guidance topics of this Note that are especially relevant to the Baseline Study are Assessment Scoping and Climate Information and Impacts.
The Consultant shall work closely with the EBRD in applying this technical guidance in the analysis. In case there are any affordability concerns, the Consultant shall suggest possible mitigation measures. Please also note that the time period for assessing climate change impacts is to be the lifetime of the project and not just the lifetime of the loan.

3.2 Technical Assessment

3.2.1. Technical Assessment - Water Demand

The Consultant shall describe and assess the key attributes of the current service and the service developments in the Project area over the last 3 years, including \textit{inter alia}:

- Service area for each of the thirteen regional departments: physical, administrative and political delineation.
- Total number of users and connections by user category, i.e. private farmers, industrial, official, public, etc. (also number of people served).
- The irrigation service provided: the quality and quantity of water provided specifically in terms of their compliance with relevant national environmental laws and regulations, relevant European Union (“EU”) environmental standards and World Health Organisation (“WHO”) guidelines, as applicable.
- Existence of water quality monitoring: practices and standards, where relevant.
- Water use in terms of total volume and per capita/ha water consumption. This data shall later be used as the base for a water consumption forecast.
- Water demand solutions implemented to facilitate efficient use of water by end-users.

3.2.2. Technical Assessment - Water Supply & Irrigation Infrastructure

The Consultant will describe and assess the key attributes of the current service and the service development in the RoU over the last 3 years, including \textit{inter alia}:

- Inventory and classification of existing systems and facilities: irrigation, transmission, pumping, storage, distribution, main valves, flow control and measurement devices, and present a schematic map (including associated facilities).
- Operation of irrigation network: based on basic hydraulic modelling of flows in the primary distribution system, summarise and evaluate integration of major system components (transmission, pumping, storage, distribution and detect critical problems and bottlenecks. Determine the potential for water consumption reduction if an acceptable demand management programme (including metering and leakage reduction) and/or modern irrigation measures (drip-/sprinkler-irrigation) is implemented and provide an opinion on whether capacity expansion of water system is needed in the medium term.
- Assess the main components of the system in terms of capacity, energy efficiency (including energy required to produce and distribute water in absolute and unit terms), resource efficiency (water and materials), technical and environmental performance, resilience, state of repair, maintenance practices, age, quality of materials and equipment, adequacy, bottlenecks, etc. and outline and assess service-related incident frequency, including conveyance leaks/breaches record and detection/repair policy.
- Identify options for local deployment of renewables such as solar photovoltaics to augment energy supplies (where viable).
- Water losses: determine the difference between the amount of water produced and delivered into the system from all sources and the amount transferred/sold, evaluate the reliability of the determination of the amounts of water produced and sold, estimate magnitude, causes
and importance of physical and administrative losses, and establish water balance (production = consumption + physical losses + administrative losses). Where appropriate, identify and/or validate material water losses on the irrigation network using remote sensing techniques, analytics etc.

- Comment on transmission efficiency, including a simple cost-benefit assessment of open vs piped water transfer scheme.
- Assess the vulnerability of infrastructure to climate change (e.g. effects changes in water availability and temperature increase). Assess the externalities of infrastructure, both positive and negative, on the aspects of rural livelihoods, social and economic development and ecosystem conservation.

The Consultant shall liaise with other consultants currently working on EBRD financed projects in the respective regions/cities to ensure problems identified and lessons learned are taken into account in the Project.

3.2.3. Technical Assessment – Sustainability of water sources and demand assessment

The Consultant will describe and assess the key attributes of the current water sources, including *inter alia*:

- Collect, review and evaluate for completeness and consistency all available climatic and hydrologic data relevant to the RoU. Review existing hydrological models and their accuracy.
- Compute monthly runoffs and inflows using universally accepted inflow-outflow models.
- Provide inventory of existing water sources: taking into consideration the medium-to-long-term trends of predicted climate change impacts on the water availability in the RoU, assess the water resources vulnerability to climate change risks. Several scenarios should be developed and considered.
- Comment on feasibility of usage of alternative water sources, taking into account vulnerability of water resource to climate change.
- Describe the best practices for introduction of efficient resource management and basin management systems
- Assess the vulnerability of water sources to climate change.
- Assess future irrigation water demand until the year 2040.

3.3 Identify priority upgrade measures and related PIP

The Consultant will present, justify and develop in more technical detail the priority upgrade measures and PIP for the period of 4 years.

3.3.1. Present and justify the PIP

The PIP will be oriented towards sustainable investments and maximisation of operational cost savings, improved operational efficiency and minimisation of E&S impacts in the RoU. The Consultant will clearly explain and justify the selection of all Project components within the context of the National Irrigation Programme and the budget proposed, as well as priority resource efficiency measures and environmental and social considerations. The Consultant will also discuss the how the relation of the PIP with the entire irrigation system (associated facilities).
The Consultant will conduct a preliminary cost-benefit analysis of each potential major Project component, using appropriate criteria, such as payback time, internal rate of return, net present value or other.

Where appropriate, the development of the PIP should also take into account the projected impacts of climate change if appropriate and justified. The EUFIWACC Note should again be used as a technical guide, especially the sections on Project, Planning and Design and Analysing and Explaining Risks, Costs and Benefits. This may include investments for adaptation measures to address the risks of climate change, e.g. deeper drilling of boreholes or diversification of water supply to ensure long-term security of water supply, or the installation of back-up generating capacity to improve the security of the energy supply to the cost-efficient use of renewable energy sources.

The PIP will explain whether and how each of the proposed PIP activities could contribute towards the climate resilience of water supplies in the RoU. It will also identify those PIP activities that have an identifiable and positive impact on the climate resilience of water supplies. Based on this assessment, the PIP will then identify specific investment components that are most worthy of co-financing from climate change financing mechanisms such as the Green Climate Fund, in consultation with Bank staff.

In order to streamline the Project implementation, the Consultant will propose options of grouping the Project’s components into [five] sub-projects (or other number to be agreed with the Bank and the Ministry) and rank them in order of priority and speed of implementation.

### 3.3.2. Detailed programme description and cost estimates

The Consultant will establish cost estimates for the PIP. Where cost estimates for individual components are not readily available or are cursory in nature, the Consultant will engage with relevant organisations/ agencies/ experts to obtain the necessary cost estimates. An example of a simplified investment cost breakdown format is shown in Table below.

<table>
<thead>
<tr>
<th>Component</th>
<th>Estimate, $m</th>
<th>% Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price terms (e.g.$ 2019)</td>
<td>Year 1</td>
<td>Year 2</td>
</tr>
<tr>
<td>Capital expenditure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Component 1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Component 2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Etc.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total capex</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The base cost of each priority investment will be based on expenditure category. The costs will be expressed at prices in effect at the date of estimation and include all intervention-related costs irrespective of financing source and whether they may be considered for EBRD financing. For each component, the base cost will be allocated over the entire implementation period, based on realistic expectations of when the expenditures are likely to be incurred. The Consultant will also consider incremental recurring costs, which (depending upon the nature of the intervention and the desired outcomes) may be critical elements of total Project costs. These could include salaries of agency employees assigned, project management office administrative costs etc.

The Consultant will incorporate allowances for potential increases above most likely scenario in the physical contingency. The Project design will be refined to reflect a level where EBRD would normally expect for the physical contingences to be set i.e. 5–10% of the base cost. The Consultant will also make provision for price contingencies in order to take into account local and foreign inflation.
3.3.3. Expected impacts on performance and efficiency of irrigation infrastructure agriculture production

The Project is expected to positively impact the operation and performance of the irrigation system in the RoU through meaningful infrastructure investments. The Consultant will:

- Provide information on how much energy is expected to be saved/reduced carbon emissions through modernisation of mechanical and electrical equipment.
- Provide information on the increased reliability of the critical infrastructure to outages and expected impact of climate change (reduced weather-related disruption and damage).
- Provide information on expected water loss reduction.

(Additional guidance is provided in section 3.4.3)

3.3.4. Expected impacts on agriculture production

The Project is expected to impact the agriculture production through improved access to irrigated land and water services. The Consultant will:

- Provide information on how much water can be sustainably transferred to the RoU (taking into account climate change and international water agreements in Central Asia). Several scenarios should be presented and a stress testing done under various climate scenarios.
- Provide information on change in irrigated land for agriculture production in the RoU.
- Provide information on crop water requirements.
- Summarise and quantify the expected impacts of the Project on agriculture production. Provide information on additional capacity for agriculture potential achieved through improvements in soil quality as a result of the project, e.g. reduced soil erosion, and reduced soil salinity.

Data sources: Rigorous quantitative analysis may be complemented by focus group interviews and a smaller survey, and data collected from national and international best data sources.

3.3.5. Inclusion benchmarks

The Project seeks to improve regional, gender and youth inclusion through improved access to irrigated land and water services for local farmers and WCAs in the RoU. The project is expected to improve economic opportunities (employment, entrepreneurship, training) for both women and men, and in particular the young population, in the Project area. The Consultant will recommend reasonable benchmarks associated with market expansion/economic inclusion, e.g.:

Through new economic opportunities for the population arising from the Project

- Discuss and quantify to what extent the improved water and irrigation services will create or preserve employment opportunities (commercial agriculture etc)
- Assess expected improvement in local employment (% increase; # of men and women; by sector)
- Assess the Project impact on jobs preservation (comparing with a no investment case; #of men and women; by sector)
• Assess the Project’s impact on agricultural production, earnings and economic opportunities: assess to what extent the quality of water that will be provided to the RoU is suitable (from a physical, chemical, bacteriological and biological point of view) for irrigation.

• Assess to what extent the land use will improve (yield of land, employment and workforce, sex-disaggregated data) as a result of the Project. Differentiate by type of agricultural entity (men and women subsistence farmers, e.g. <5ha, versus commercial entities).

Through a gender specific assessment of the impact that the improved quality of water and irrigation services in the RoU will have on the economic opportunities for women (compared to men)

The Consultant will:

• By using the same methodology as applied above, assess the links between the Project and the economic circumstances of women specifically, and whether access to irrigation will affect the economic opportunities of women compared to men (i.e. through related time savings or education diversion)

On the basis of the above the Consultant will assess the economic inclusion benefits of the Project and recommend reasonable project indicators/benchmarks associated with economic inclusion, which will be sex-disaggregated where possible, such as – but not limited to:

• The project will increase by [X] (from [] to [] per cent) / Preserve by [Y] (from [] to [] per cent) coverage of land under irrigation, including [Z] number of arable land owners (by gender where possible)

• The project will increase usage of the target land areas from [] to [] per cent and yield form [] to [] per cent differentiating between commercial and subsistence farmers, including [Z] number of women farmers (also as a result of better water services)

• The project will preserve by [X] / increase by [Y] the number of jobs (by gender, age and sector for e.g. commercial agriculture)

• Including [Z] number of MSMEs (men-led and women-led) to be created as a result of this project.

• The project will increase the number of women irrigation water users from [X] to [Y] per cent

• Introduction of local training programme on commercial agriculture for men and women

• Number of people (by gender and age) trained (e.g. on operating irrigation equipment) from [X] to [Y] per cent.

• Increased membership of women farmers in agricultural cooperatives/water user associations by [Y];

• Increased agricultural economic activities of women from [X] to [Y] per cent as a result of improved access to services;

Benchmarks can also refer to inclusive policy engagements promoting gender equality and women’s empowerment, youth inclusion and inclusion of populations living in more disadvantaged regions, where relevant.

The source of systemic inclusion impact would come from the ‘scale’ of overall project outcomes in terms of enhanced economic opportunities of inclusion target groups, resulting from the new or improved water and irrigation services, in relation to the overall population in the RoU.
Data sources: Rigorous quantitative analysis will be expected complemented by; focus group interviews and a smaller survey, testing of tap water and agricultural water for pesticides, salinity, etc.; and, data collected from national and international best data sources.

Capacity building TC: Based on the previous Sections, the Consultant will evaluate the scope and draft the TORs for a specific capacity building TC, to increase economic opportunities of the local population, and notably for women and youth, by enabling their participation in key economic activities in the RoU, through access to employment and skills and enhanced access to water services.

3.3.6. Demand risk

The Consultant will assess the demand risk and confirm whether there will be sufficient demand from the individual farmers and WCAs for using newly created water supply and irrigation infrastructure to economically justify the PIP and will enable the repayment of associated EBRD/other debts. The consultant will take into account expected changes in the sector (including the ongoing liberalisation of cotton production), as well as the current subsidy schemes (including energy) impacting costs, hence the demand.

3.3.7. Procurement and Implementation Strategy

The Consultant will prepare a Procurement and Implementation Strategy taking into consideration the Bank’s Procurement Policies and Rules, (“PP&R”) which can be accessed via the EBRD website through the following link: http://www.ebrd.com/work-with-us/procurement/policies-and-rules.html.

The Consultant will present and assess which procurement and implementation strategy would best fit the scenario, outlining pros and cons for each alternative, and draft a preliminary procurement plan, including detailed descriptions of all project components grouped into categories by sub-sector and expected contracting packages. The Consultant will specifically take account of how contracting packages are to be delivered effectively using local partners and design institutes.

The Consultant will develop an implementation schedule for each Project component, describing the manner in which the construction or implementation activities will proceed and providing assumptions about procurement, delivery and execution times. PIP will be broken down into [five] sub-projects in order to accelerate implementation.

In the preliminary procurement plan the Project components included in the PIP will be broken down into specific contracts with the aim of keeping the number of said contracts to a minimum. The Consultant will take into account the services, supplies and works needed to implement the required contracts. The Consultant will consider which procurement approach (e.g. based on different supply and works contracts or a turn-key contract) would be the best way of implementing each investment component. The Consultant shall assess the scope of procurement and implementation support consultancy services required to implement the Project.

The Consultant will also cover the following aspects with regards to the Project implementation:

- **Project risk matrix** - a risk matrix outlining the key challenges and risks associated with the Project and the measures proposed to deal with them.
- **Project institutional plan** – a proposal on how to address the key shortcomings identified in the institutional framework. This will include appropriate incentive structures, and any
contractual agreements required. Consideration will be given to effective regulation and monitoring of the sector.

3.4 Financial Projections

3.4.1 Financial model

The viability of the Project shall be demonstrated by means of a financial model that would include projections for the period of the Project and beyond to be prepared by the Bank with input from the Consultant.

The projections shall be fully consistent with the Project terms and based on prudent assumptions. Macro assumptions will be provided by the Bank. The Consultant will advise the Bank on key drivers of the Project that are required to calculate economic rate of return (“EIRR”) of the Project and each major project component. Based on these inputs, the Bank will provide the Consultant with a template model. The Consultant will fill in the required inputs in the model and work with the Bank to adjust the model, if required. The Consultant will then review the final output.

3.4.2 Analysis of upgrade measures that deliver efficiency savings

The PIP may include improvements in technologies, physical assets and/or practices that allow greater efficiency in the use of various inputs (e.g. energy, water, etc.) and thereby generate cost savings. Such measures should yield benefits that outweigh the costs in the short- to medium-term, and generate a positive IRR.

Inputs for the calculation of efficiency savings

Opportunities for efficiency savings may be driving improvements in the use of energy, water, labour or other inputs such as fuel or replacement equipment/parts. The table below provides examples of the categories of measures that may deliver such efficiency savings (please note that this list is non-exhaustive) and also outlines the key data that would need to be collected in order to assess quantitatively (and in financial terms) the savings that could be achieved. The consultant shall make projections for the collected data, which can be used as current and target benchmarks for the project.

| Table: Examples of upgrade measures that deliver efficiency savings |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Category (indicative)       | Examples of possible measures            | Nature of efficiency saving | Data required for financial analysis | Unit of measurement (typical) |
| Electricity use             | • Variable speed pumps/Variable frequency drives | Reduced electricity consumption (e.g. kWh) | Electricity tariff: 
  - At present time 
  - Projected over the lifetime of the investment | USD/kWh |
|                            | • Automation                          |                            |                                  |                             |
|                            | • Correctly sized pumps               |                            |                                  |                             |
|                            | • Improved pump maintenance regimes   |                            |                                  |                             |
|                            | • Alternative energy sources (e.g. solar pumps; on-site bioenergy, etc.) | | | |

| Water use                  | • Canal repairs                        | Reduced water loss, consumption or abstraction (e.g. m³) | Water tariff: 
  - At present time 
  - Projected over the lifetime of the investment | USD/m³ (if volumetric) or |
<p>|                            | • Covered pipelines                    |                            |                                  |                             |
|                            | • Sprinklers                           |                            |                                  |                             |</p>
<table>
<thead>
<tr>
<th>Category (indicative)</th>
<th>Examples of possible measures</th>
<th>Nature of efficiency saving</th>
<th>Data required for financial analysis</th>
<th>Unit of measurement (typical)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drip irrigation</td>
<td></td>
<td>investment</td>
<td>USD/yr if based on a flat fee</td>
</tr>
<tr>
<td></td>
<td>Automation (e.g. SCADA)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel consumption</td>
<td>Modern and more efficient machinery</td>
<td>Reduced fuel consumption (e.g. litres consumed)</td>
<td>Price of fuel (e.g. diesel) - At present time - Projected over the lifetime of the investment</td>
<td>USD/litre</td>
</tr>
<tr>
<td></td>
<td>Connection to electricity grid to eliminate need for generators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour inputs</td>
<td>Automation</td>
<td>Reduced labour costs (e.g. worker time needed)</td>
<td>Typical salary per employee or Daily/hourly wages - At present time - Projected over the lifetime of the investment</td>
<td>USD per unit time (year, month, day or hour)</td>
</tr>
<tr>
<td></td>
<td>Improved training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other inputs</td>
<td>Longer lasting/more reliable equipment</td>
<td>Reduced maintenance / replacement costs</td>
<td>Cost of equipment items Maintenance cost of equipment items Expected lifespan of equipment items</td>
<td>USD per equipment item</td>
</tr>
</tbody>
</table>

The Consultant will collect information about the prices and/or tariffs associated with the use of resources such as electricity and water, as well as other inputs such as fuel, labour, etc. In order to perform the preliminary cost benefit analysis over the anticipated lifespan of the assets, the Consultant will use projected future tariffs/prices that reflect anticipated increases in these costs over time.

**Calculation of potential efficiency benefits**

Using this information, the Consultant will then calculate the key efficiency savings or benefits that may be delivered by the upgrade measure in question. While the specific indicators to be calculated will depend upon the IWC system, they will usually include the following:

i) Amount of water losses eliminated.
ii) Reduction in total GHG emissions.
iii) Annual reduction in tonnes of CO2 equivalent derived from the lowering of water losses system-wide.
iv) Reduction in water consumption.
v) Increased reliability and reduced weather-related disruptions and damage
vi) Change in value for water.
vii) Change in value for land.
viii) Total population benefitting from improved access to irrigation services.
ix) Additional capacity for agriculture potential achieved through improvements in soil quality as a result of the project, e.g. reduced soil erosion, reduced soil salinity.
x) Other suggested by the Consultant or the EBRD.
3.4.3 Analysis of upgrade measures that deliver productivity gains

**Inputs for the calculation of potential productivity gains**

Examples of the indicators that may be used in this analysis are shown in the table below. The comparison of the key indicator of returns to land with the likely investment cost provides the initial screening of potential interventions. Given that likely gross returns to land exceed the likely investment cost, a cost benefit analysis to establish the feasibility of the intervention is required.

Table: Examples of indicators used in analysis of water service improvements

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water balance</td>
<td>• Change in water consumption (km(^3)/yr; USD/yr)</td>
</tr>
<tr>
<td></td>
<td>• External indicator – land: USD per hectare</td>
</tr>
<tr>
<td>Crop model</td>
<td>• Yields</td>
</tr>
<tr>
<td></td>
<td>• Cropping intensity</td>
</tr>
<tr>
<td></td>
<td>• Water productivity indicators including yields/water used and value-added/water used for different crops</td>
</tr>
<tr>
<td></td>
<td>• Total output value</td>
</tr>
<tr>
<td></td>
<td>• Labour/output value</td>
</tr>
<tr>
<td>Energy use (if applicable)</td>
<td>• Reduction in electricity (or other energy) consumption (kWh, toe/yr, USD/yr)</td>
</tr>
<tr>
<td></td>
<td>• Reduction in GHG emissions (tonnes CO(_2)/yr)</td>
</tr>
</tbody>
</table>

3.5 Business Model for Recovering Investment Costs

3.5.1 Describe the ownership and management structure of the IWC system

The Consultant will determine the ownership and management structure of the irrigation system. This analysis needs to be conducted taking into account the three levels of analysis and intervention: i) on-farm level, ii) sub-system level; and iii) system level.

Table: Illustrative breakdown of levels/entities involved in irrigation improvements

<table>
<thead>
<tr>
<th>Level</th>
<th>Examples of entities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 On-farm</td>
<td>Farming enterprises</td>
</tr>
<tr>
<td></td>
<td>Dekhkan enterprises</td>
</tr>
<tr>
<td>2 Sub-system</td>
<td>Water Consumer Associations (WCAs)</td>
</tr>
<tr>
<td></td>
<td>Regional/local branch of irrigation agency</td>
</tr>
<tr>
<td>3 System</td>
<td>Regional irrigation agency</td>
</tr>
<tr>
<td></td>
<td>Government ministry</td>
</tr>
</tbody>
</table>

For each of the levels and entities set out above, the Consultant will describe: a) governance framework, b) structure of the organisation, c) rights, powers and responsibilities.

3.6 Environmental and Social Audit and Assessment
3.6.1 Context

The Consultant will carry out an Environmental and Social Audit and Assessment (“ESA”) in order to assess the environmental and social aspects of the Project, to be consistent with local/national environmental and permitting requirements and the EBRD’s 2014 Environmental and Social Policy and associated Performance Requirements. The upgrading and rehabilitation of the existing water and wastewater infrastructure is typically a brownfield category B project under the EBRD ESP (2014), requiring an environmental and social audit of the existing facilities and operations and environmental and social conditions relevant to the Project and a focused environmental and social assessment that is proportionate to the project’s nature, size and location, as well as to the characteristics of the potential impacts and risks.

The ESA will identify potential future adverse impacts and risks associated with the project, identify potential improvement opportunities, and recommend any measures needed to avoid, or where avoidance is not possible, minimise and mitigate adverse impacts.

The assessment process will be commensurate with, and proportional to, the potential impacts and risks of the Project and the Client’s existing operations. The assessment will cover, in an integrated way, all relevant direct and indirect environmental and social impacts and risks of the Client’s operations, the Project and the relevant stages of the project cycle (e.g. pre-construction, construction, operation, and decommissioning or closure and reinstatement).

The Environmental and Social Assessment will also determine whether further studies are required, focusing on specific risks and impacts, such as climate change, resilience issues such as water abstraction from the Abu Darya and Syr Darya basins, targeted stakeholder engagement and E&S awareness raising programs, labour audit, cumulative E&S impacts due to water resource sharing with neighbouring countries, etc.

The Environmental and Social Audit is required to assess the Client’s current operations in terms of compliance with national legislation, national or local permitting requirements, the relevant provisions of the EBRD Environmental and Social Policy and Performance Requirements (2014) and pertinent EU environmental standards. Further, the audit must review possible historical environmental and social issues, such as potential contamination of soil and/or groundwater or land acquisition disputes.

Should the initial (inception) stage of the ESA identify that the Project could involve Category A components (such as major expansion of the water abstraction or wastewater treatment facilities, a new sludge incineration plant or landfill, potentially significant economic/physical displacement or social impacts to local communities or works in protected or sensitive areas) the ToR for the ESA assignment will be amended by EBRD to include the preparation of ToR for a full Environmental and Social Impact Assessment (ESIA) in line with the Bank’s ESP and fit for disclosure together with the other suite of required documents. Any material revisions to the ToR will be made in consultation with the Consultant.

The E&S Assessment is to be carried out in accordance with:

- Applicable local, national and regional requirements, including those related with environmental and social impact assessments;
- The EBRD’s ESP (2014) (and the incorporated Performance Requirements (PRs)), and relevant European Union (EU) requirements (including, but not limited to, the EU EIA Directive and IE Directive);
- Relevant international conventions and protocols relating to environmental and social issues, as transposed into national legislation.

Key E&S impacts/risks associated with the rehabilitation of the pumping stations include sustainable water abstraction and use, potential land acquisition and access, labour issue...
(including child labour in the chain), client Environmental and Social (E&S) capacity, impacts from associated facilities and construction related health and safety risks. E&S due diligence will include an E&S audit of selected pumping stations, an E&S analysis of the investment programme, engagement with key stakeholders as well as a comprehensive review of the E&S practices and management systems of the implementing agency.

3.6.2 Scope of work

The Consultant will:

- Identify existing and Project-related environmental and social impacts and risks;
- Describe and characterise a relevant environmental and social baseline commensurate with the risks posed by the current site operations and the Project;
- Develop a draft E&S Assessment report in accordance with the Bank’s requirements as defined in the ESP, including a Compliance Summary table with the Bank’s PRs;
- Prepare a draft Stakeholder Engagement Plan (SEP), draft Environmental and Social Action Plan (ESAP) and draft Non-Technical Summary (NTS);
- Identify if any additional studies will be required to cover relevant aspects in greater detail (e.g. biodiversity, resettlement, retrenchment, etc.). (Any such work will be commissioned under separate Terms of Reference); and,
- Finalise all documentation further to the EBRD, other lenders’ (if involved) and Client’s comments (from draft versions to final versions).

Task 1: Review of available data and site visit

The Consultant will:

- Review all available studies and baseline data.
- Identify and assess relevant regional and strategic environmental and social assessments or studies that affect the Project. Where regional or strategic assessments or studies are identified and assessed, these will be included in the summary of due diligence undertaken, including the Non-Technical summary.

Majority of existing data and documentation are expected to be available in Russian and Uzbek languages. The Consultant must be prepared to request documentation from the Client. It is expected that consultant will coordinate E&S data collection alongside the data gathering for the technical Feasibility Study.

Following the review of available data, the Consultant will visit the site, to obtain any supplemental information needed to complete the E&S Assessment and carry out the on-site activities necessary to fulfil the E&S Audit reporting requirements.

Following completion of the data review and site visit the Consultant will deliver a summary of key findings.

Task 2: Environmental and Social Assessment

The assessment will contain:

- A Project Description & Identification of Relevant Associated Activities & Operations: The Consultant will prepare a description of the Project including details of any alternatives considered for the project and information on neighbouring operations and activities.
- Analysis of Legal Requirements: The Consultant will identify applicable local, regional and national environmental and social laws and regulatory requirements of the
jurisdictions in which the Project operates, including those laws implementing host country obligations under international law. The Consultant will analyse local/national assessment and permitting requirements and the EBRD environmental and social requirements and compare them within a gap analysis in tabular format, presented to the structure of the EBRD PRs. The Consultant will review the compliance of the Project with the applicable requirements, together with the status of any material permits or authorisations that are required. For example, if a RAP or LRF etc. are available the Consultant shall review the information on legal requirements to confirm if any gaps exist with the PR5 requirements.

- A Description of the Baseline Conditions: The E&S Assessment will include a review of the aspects of the physical, biological and socio-economic environment likely to be affected by the proposed Project. Indicative guidance on the contents of the overall assessment is provided in Annex 2. The baseline assessment will include consideration of the inter-relationship between the relevant factors, as well as the exposure, vulnerability and resilience of these factors to natural and manmade disaster risks.

- A Project Assessment and Management of Impacts and Issues: In accordance with the Bank’s ESP (2014), the Consultant will analyse the potential environmental and social impacts and risks of the Project, as well as opportunities that the Project may provide, including infrastructure development (e.g. water, wastewater, a heat and electricity distribution networks, transportation access) and other associated facilities, for which the EBRD financing is being sought. The E&S Assessment will include a review of the likely effects of the proposed Project on the physical, biological and socio-economic environment to provide an identification and characterisation of potential E&S impacts, including beneficial (as well as adverse) impacts. This review will be structured to include all relevant stages of the Project’s life, e.g. construction, operation and maintenance, closure and decommissioning, and residual E&S impacts. The level of analysis and reporting will be commensurate with the risk magnitude of the identified issues. Indicative guidance on the contents of the overall assessment is provided in Annex 2. For each identified adverse future impact, issue and/or risk, the Consultant will propose measures to avoid, minimise, mitigate or compensate for them. The assessment shall include a comparison of the increased water abstraction (allowed by the Project) against the reduction of water diverted for irrigation through loss prevention and efficiency increase (enabled by the Project). On a health and safety perspective, the assessment shall cover the existence/ use/purchase of asbestos containing materials (ACM) such as Compressed Asbestos Fibre gaskets and cement asbestos containing pipework, as well as public protection at the irrigation canals (e.g. risk of drowning).

- An EBRD PR Compliance Assessment: Based on the results of the E&S Assessment, the Consultant shall evaluate the compliance status of the Project with the EBRD PRs using the format provided in Annex 3.

Task 3: Environmental and Social Audit

The E&S Audit is required to review the current and, to a limited extent, past operational performance of the Client’s existing operations. Key issues to be covered under the E&S Audit may include, but not be limited to:
- A review of the Client’s existing environmental and social management systems, policies and practices;
- Organisational capacity and resources;
- Human Resources and employment (e.g. child labour, forced labour, non-discrimination and equal opportunity, workers’ organisations, contractor management, retrenchment and employment) policies;
- Occupational health and safety (local and national requirements, applicable EU/international requirement and standards, key health and safety issues, control and major accident hazards, current health and safety monitoring programme, summary of regulatory compliance status, summary of health and safety expenditures, emergency response etc.);
- Pollution prevention measures available at facilities and overall regulatory compliance with national requirements and pertinent EU standards including applicable Best Available Techniques and Best Available Techniques Reference Documents. In addition, this assessment will need to review compliance with best international practice as a benchmark against current operations and planned pumping stations upgrades;
- Industrial hygiene (including worker exposure, and rates of industrial diseases) and worker health and safety;
- Use and management of hazardous substances;
- Community health, safety and security as it relates to the Client’s existing operations;
- Major hazards assessment and management; environmental management plans in the event of an incident, accident of spill both on land and at sea or river;
- Current company policy and practice in relation to avoidance of third party intrusion into potentially hazardous areas (fences, security, personnel, others);
- Management of potentially hazardous works;
- Waste management;
- Noise and vibrations both during construction and operation of the Client’s facilities;
- Overview of current Client’s policy and procedures regarding land acquisition (compensation policy, consultation activities related to land acquisition including grievance management, if applicable);
- Identification of potential past environmental liabilities which may affect the Bank (e.g. soil and ground water contamination as a consequence of past and present operations);
- Overview of the Client’s supply chain (e.g. suppliers of main materials and resources including energy) and identification of relevant environmental, social, labour and/or reputation issues; and
- Public interaction, including historical responsiveness to public comments, complaints and questions. The audit should also identify the Client’s main stakeholder groups and current stakeholder engagement activities in line with PR10.

**Task 4: Reporting**

Upon completion of Tasks 1, 2 and 3, the Consultant shall prepare the following draft reports of the assessment findings:

- **Summary of key findings** (as part of the Inception Report): On completion of the data review and site visit the Consultant will deliver a Summary of Key Findings to present the initial findings of the work to-date. This report will summarise the key issues that
have been identified and, if necessary, will highlight the need for any additional studies, e.g. in relation to resettlement, livelihood, retrenchment, biodiversity, etc. This document will be delivered by email or in presentation format. If the Consultant identified any project component that may change the categorisation to A, this should be outlined and justification provided in this report.

- **E&S Audit and Assessment Report (ESA):** The Consultant will provide a concise but comprehensive report of the overall E&S Audit and Assessment. The guidance for the report content provided in Annex 2 may be used to structure the report but the Consultant is expected to use their professional experience to determine the final contents.

- **Environmental and Social Action Plan (ESAP):** The Consultant shall develop a comprehensive ESAP to address issues identified during the E&S Assessment and the E&S Audit. The ESAP will focus on those issues that are required to bring the operations into compliance with the EBRD’s requirements and will be presented and sequenced by PRs. Actions identified must be numbered, clearly defined, indicate a time frame for completion (with specific reference to those actions that must be completed before financial close if appropriate) and a responsible party specified. Further, each item must contain a description of the factors that will be used to determine when the identified action is closed/completed. The Consultant will also inform the Client about any material budget implications of ESAP items (although this information may not be required in the public domain). The ESAP will be compact and, if needed, details will be included in sub-plans referenced in the main ESAP. The required format the ESAP is given in Annex 4.

- **Stakeholder Engagement Plan (SEP):** The Consultant shall prepare a SEP in compliance with the PR10. The scope and level of detail of the SEP will be scaled to fit the needs of the Project and the objectives of EBRD PR10. Following review of the Project operations, the Consultant will propose a format best suited for the specific Project needs. Guidance for the contents of an SEP is provided in Annex 5.

- **Non-Technical Summary (NTS):** The Consultant will prepare, in consultation with the Client, a concise, over-arching, standalone NTS. The NTS will be written in non-technical language and the Consultant will ensure that the NTS can be used to demonstrate compliance with the EBRD requirements, and provide confirmation that the documents are ready for public disclosure. An indicative list of issues for the NTS is given in Annex 6.

The Consultant will submit the five deliverables listed in the previous section to the Bank in English. The final versions of the ESAP, SEP and NTS will be translated into Uzbek.

### 3.7 Local Feasibility Study and Designs

As an attachment to the Final Report, the Consultant should prepare a separate report that would satisfy the requirements of the decree of the President of Uzbekistan №3857 from 16 July 2018 or other relevant legislation required for the Project to be approved for financing by the government of Uzbekistan (“Local FS”). The Consultant is not responsible for the final approval of the Local FS.
The local FS will be based on the [Draft] Final Report prepared by the Consultant. The Consultant is expected to hire a qualified local firm acceptable to the Bank with relevant experience for this task (the “Local FS Consultant”). The following scope is envisaged:

- Reformating of the Final Report so that it is compliant with said requirements.
- Assisting the Ministry in approval of the Project by the relevant authorities, including preparation of replies to comments by the said authorities.
- Completing the financial and economic part of the Local FS, including but not limited to:
  - Carry out sensitivity analysis;
  - Calculate key financial and economic indicators of the Project, including economic internal rate of return, internal rate of return and net present value, with sensitivity analysis and quantitative risk analysis.

According to the Bank’s preliminary market sounding, the total cost of the Local FS should not exceed EUR 30 thousand. EBRD could share the contact details of several local firms on request.

4. IMPLEMENTATION ARRANGEMENTS AND DELIVERABLES

The duration of the assignment is expected to be 18 weeks. The Consultant will report to the EBRD’s Operation Leader on all aspects of the assignment whilst liaising with representatives of the Government.

The Government is expected to provide the Consultant with working space, necessary furniture and telephone connections.

The Government is expected to designate senior officials to be the primary contact persons with specific responsibility for assisting the Consultant and co-ordinating activities.

The Government is expected to make available all of their records, plans, reports, designs and other documents as appropriate, but it will be the responsibility of the Consultant to translate these documents, if necessary.

The Government is expected to provide access to all of their facilities and employees for interviews or assistance relative to an understanding of the functioning of system facilities.

The Consultant will pay for international telephone calls, office supplies and external printing. The Consultant will also pay for all local transportation required by the Consultant’s staff throughout the duration of the assignment.

The Consultant will be responsible for providing suitably qualified interpreters/translators to work with their staff.

Once the contract with the Consultant is signed, the Consultant is expected to start his site visits within two weeks (“Mobilisation Date”).

Unless otherwise agreed with the Bank, the Consultant will produce in the course of the assignment the following:

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Scope</th>
<th>Timing (from the Mobilisation Date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inception</td>
<td>Following the site visit, initial data review and initial opinion</td>
<td>3 weeks</td>
</tr>
<tr>
<td>Report</td>
<td>as to a project proposal, the Consultant will submit to the Bank an Inception Report presenting the initial findings, with an emphasis on findings having an impact on the time schedule and factors affecting these Terms of Reference. The Bank will provide comments on the inception report to the Consultant.</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>Draft PIP Proposal</strong></td>
<td>Draft PIP Proposal will include: description of the Consultant’s approach to selection of PIP components, justification and expected benefits of each proposed component, PIP table and implementation timeline. The Consultant will distribute the proposal to the EBRD and the Government in English and Russian.</td>
<td></td>
</tr>
<tr>
<td><strong>PIP discussion and Procurement Workshop</strong></td>
<td>A two-day workshop organised by the Consultant with relevant stakeholders (up to 80 participants, relevant for each subject) will consist of the following parts: 1) Presentation and discussion of the Draft PIP Proposal, 2) Presentation and discussion of the international best practice in governance of the irrigation sector and potential for unbundling (section 3.1.3) 3) Training on EBRD’s procurement approach conducted by the EBRD staff.</td>
<td></td>
</tr>
<tr>
<td><strong>Draft E&amp;S Assessment report</strong></td>
<td>Including Draft Environmental and Social Audit and Assessment Report, ESAP, SEP and NTS.</td>
<td></td>
</tr>
<tr>
<td><strong>Draft Final Report</strong></td>
<td>The draft Final Report will include all deliverables as described in the Scope of Work and include: (i) an assessment of the existing situation, facilities and sector overview; (ii) an outline of a long term investment strategy; (iii) proposals for components to be included in the PIP with cost estimates; (iv) an overview of cost savings to be achieved after implementation of the Project, by component; (v) financial projections and EIRR; (vi) a procurement and implementation strategy and procurement plan; (vii) the scope of work for the project implementation team; and (viii) a climate resilience and resource efficiency assessment report and a preliminary PIP in the Excel format for resource efficiency measures and main GET indicators. The Consultant will distribute the draft Final Report in English and Russian to the Bank and the Government for comments and will organise a joint meeting to present the draft Final Report (“Presentation”) with all parties in Tashkent within two weeks after distribution of the Report.</td>
<td></td>
</tr>
<tr>
<td><strong>Final Report</strong></td>
<td>To be submitted within two weeks after the Presentation date by the Consultant, elaborating and reflecting all comments addressed during the Presentation, and including summary information on the Project.</td>
<td></td>
</tr>
<tr>
<td><strong>Local Feasibility Study</strong></td>
<td>18 weeks</td>
<td></td>
</tr>
</tbody>
</table>
Additionally, the Consultant will send bi-weekly updates to the Bank: every two weeks the Consultant should send concise emails to the OL in a bullet-point format that will: 1) describe what was accomplished since the previous report/email, what tangible milestones were achieved and what experts were involved; 2) benchmark it against what was expected to be accomplished in accordance with previous bi-weekly email, 3) outline the work plan for the next two weeks, 4) describe existing and new risks and issues of the Project and 5) confirm the dates of key deliverables.

With respect to climate resilience issues, when preparing the above reports the Consultant should take note of the guidance on Communicating Findings and Implementation, Operations and Monitoring contained in the EUFIWACC Note.

Three copies of all reports in English/Russian are required; both versions will also be provided to the Bank in electronic-readable format, in both Word and PDF. Supporting data in the national language in the appendices need not be translated for English versions of the documents.

Knowledge Platforms

Subject to approval by the Client, the Consultant will facilitate the upload and updating of non-confidential Project information on-line via:

- Source (https://public.sif-source.org/) - an online cloud based project preparation and management tool, which provides templates for infrastructure projects, with the aim of improving the quality, consistency and transparency of project preparation and designed to speed up the delivery of infrastructure in the public sector across the developing world.
- Global ViP (https://www.gvip.io/mygvip) – an online public utility tool which uses social networking technology to tap into a large pool of sector experts who can be consulted to improve project design, hence providing infrastructure project decision-makers, public and private sector users just-in-time access to expertise worldwide. GViP is aimed to address the issue of project development and project preparation by allowing project developers (public and private) rapid, accurate, access to global expertise.

The overall aim is to disseminate EBRD project information on-line and ultimately to increase project quality, reduce project development costs, and reduce project preparation time. On this task, the Consultant will report to IPPF representative, as instructed by the Bank. Further information on Source and GViP can be provided to the Consultant at the start of the assignment, including User Guides on these Platforms.
Annex 1: Standard measuring indicators and GET impact indicators

**Standard measuring indicators:**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Indicator</th>
<th>Data point to be collected</th>
<th>Projected after implementation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Supply</td>
<td>Total population benefitting from access to irrigation water.</td>
<td>Number of farmers connected or with improved access to irrigation water.</td>
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<tr>
<td></td>
<td>Annual reduction in tonnes of CO₂ equivalent derived from the lowering of water losses system-wide.</td>
<td>Average (for sector) kwh used to produce 1 m³ of water multiplied with, amount of m³ of water losses eliminated multiplied with, average tons of CO₂ generated by energy generation in the country.</td>
<td></td>
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<tr>
<td></td>
<td>Annual m³ irrigation water produced.</td>
<td>M² of fields connected to improved access to irrigation water multiplied by average consumption of water per m² in m³/year.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Size of irrigated area with improved resilience</td>
<td>M² of fields newly connected or with improved access to irrigation</td>
<td></td>
</tr>
</tbody>
</table>

* measured two years after projected full loan disbursement

**GET impact indicators (as applicable):**

<table>
<thead>
<tr>
<th>GET impact indicator</th>
<th>Unit</th>
<th>Data point to be collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary energy saved</td>
<td>GJ/yr</td>
<td>Project energy use compared to baseline(^1) energy use. Primary energy includes: 1. Direct use of fossil fuels 2. Direct use of biomass. 3. Use of electricity, multiplied by a loss factor to take into account country average generation efficiencies and electricity grid losses(^2)</td>
</tr>
</tbody>
</table>

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\(^1\) The baseline is defined as the expected conditions without the project two years after full loan disbursement. The baseline is compared to the conditions projected with implemented project two years after full loan disbursement.

\(^2\) For example, with an average electricity generation efficiency of 40% and grid losses of 7%, the primary energy use (MWh) is 2.7 x the direct electricity use (MWh).
| CO2 emissions reduced | ton/CO2e/yr | Project CO2 emissions compared to baseline CO2 emissions. CO2 emissions include:
1. Emissions as a result of direct use of fossil fuels
2. Indirect emissions as a result of the use of electricity
|----------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Water saved          | m3/yr       | Project water use compared to baseline water use. Water savings must be determined for the following project activities:
1. Water recycling projects that recover wastewater streams for reuse or alternative use.
2. Application of technology or management actions that lead to effluent water quality improvements in regions with water scarcity
3. Water loss prevention and water demand management
4. Water savings achieved due to rehabilitation of IW&C infrastructure and demand size measures |
| Material savings     | ton/yr      | Material use compared to baseline material use. Material savings must be determined for project activities aimed at waste minimisation:
1. Minimisation of waste streams by integrated measures (i.e. improvement of existing installations, processes or procedures/management)
2. Waste recycling projects that reuse waste as inputs into new products or as a resource |

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3 The CO2 emissions as a result of the use of electricity are determined by multiplying the use of electricity (MWh) with the country specific grid emission factor (ton CO2/MWh) in line with the joint MDB list of grid emission factors.
4 Tons of methane emissions (ton CH4) can be converted to tons of CO2 equivalents (ton CO2e) by applying the a factor of 25 (ton CO2e/ton CH4)
5 Qualifying for ‘water saved’: treated waste water with an effluent quality at or exceeding internationally accepted effluent water quality standards.
ANNEX 2
SAMPLE REPORT FORMAT FOR AN E&S ASSESSMENT REPORT (GREENFIELD)

Note: The following is an indicative list of issues for possible inclusion in an E&S Assessment report for a greenfield Project. The Consultant is expected to use its professional judgement to determine what issues (either listed below or additional) are relevant to the Project. Issues which are not relevant to this project should be covered by a short statement that they have been considered but do not apply in this case.

Executive Summary
A concise summary description of the Project, its rationale, the existing setting, significant environmental and social impacts, recommended mitigation and enhancement measures, monitoring proposals, and the extent of the Client’s commitment to these recommendations and proposals.

1 | Project Description
Precise description of the Project within its geographical, environmental and socio-economic context. This should include information on whether and how the Project is part of a wider development plan/programme. A systematic comparison of feasible alternatives to the project in terms of location, project technology or design in terms of potential environmental and social impacts. This should include the ‘do-nothing’ option.

2 | Legal Requirements
Outline of the policy, legal and administrative context of the ESIA summarising the environmental and social and project approval requirements of the Bank, co-financiers and applicable regional/global conventions or agreements. The timeframe for public consultation, project appraisal and implementation should be outlined.

- Applicable IFI Environmental and Social Assessment procedures
- Host Country, Regional and International Regulatory Framework, standards and guidelines, treaties applicable
- Approach to benchmarking

3 | Baseline Conditions
A description of relevant aspects of the physical and natural environment and socio-economic conditions in areas affected by the project to include, inter alia:

- Air emissions and noise;
- Biological and ecological resources (fauna, flora, biodiversity, protected species, critical habitats, ecosystems);
- Climatic factors and climate change (e.g. greenhouse gas emissions, including from land use, land use change and forestry, and sectors of population more affected by climate change);
- Cultural heritage, including architectural and archaeological heritage;
- Geomorphology and geology;
- Land (past and current use, permanent or temporary acquisition);
- Land use patterns
- Landscape and visual aspects; and,
- Material assets;
- Mitigation potential and impacts relevant to adaptation;
• Other social issues: community, settlement patterns and residential properties, vulnerable groups
• Public and / or site specific transportation system;
• Socio-economic status of the population (disaggregated by gender, age, ethnicity, and other social characteristics);
• Soil (organic matter, erosion, compaction, sealing);
• Stakeholder engagement practices
• Water (accessibility, quantity and quality, surface and groundwater) and waste water management;
• Worker and public health and safety;

4 | Potential Impacts
Identification of the potential environmental and social impacts that could be associated with the Project including those of an indirect and cumulative nature. Impacts which are unlikely to arise or be insignificant should be recorded, together with the rationale for why they are considered to be unlikely or insignificant. Potential impacts must be considered at the following levels:

• Local impacts
• National impacts
• Regional/Global impacts

5 | Characterisation of Impacts and Opportunities
Identification and characterisation of positive and negative environmental and social impacts in terms of magnitude, significance, reversibility, extent and duration. The possibility for cumulative impacts is to be considered. Quantitative data must be employed to the greatest extent possible. The chapter should also identify opportunities for environmental and social enhancement and identify key uncertainties and data gaps. The following Project stages must be considered in this evaluation where appropriate:

• Construction phase
• Operation and maintenance
• Closure and decommissioning
• Residual environmental and social impacts

6 | Management of Impacts and Issues
An outline of the feasible cost-effective measures to avoid, minimise, mitigate or compensate for environmental and social impacts to acceptable levels and address other environmental and social issues; such as the need for worker health and safety improvements, inter-agency coordination, community involvement, institutional strengthening or training within the executing agency/ governmental agencies/Client or at the community level. Additionally, an outline of any measures that would enhance environmental and social aspects within the area affected by the Project and characterisation of the nature of any residual environmental and social impacts or issues that have not been addressed. A description of the financial provisions for potential risks (for example escrow accounts and insurance cover to provide for inter alia abandonment and decommissioning, site remediation and oil spills and other emergencies). The following stages must be considered where appropriate:

• Construction
• Implementation and maintenance
• Closure and decommissioning
• Residual environmental and social impacts
7 | Monitoring and Supervision
A description of how environmental and social impacts and issues will be monitored and managed in practice; including an indication of how the Project will be supervised by lenders and governmental agencies. Estimates should be provided for capital expenditure and operation and maintenance costs where possible. The following stages must be considered where appropriate:

- Construction
- Implementation and maintenance
- Closure and decommissioning

8 | Mitigation and Management Plan
A record of all measures required to address environmental and social impacts and issues as well as monitoring and supervisory activities associated with these should be consolidated in tabular form. This should also indicate institutional responsibilities, timeframes and associated costs.

Appendices

- Names of those responsible for preparing the E&S Assessment
- References and sources of information
- Records of public meetings and consultations held
- Supporting technical data
- EBRD Compliance Summary Table (see Annex 2)
ANNEX 3
ENVIRONMENTAL AND SOCIAL ASSESSMENT: COMPLIANCE SUMMARY TABLE

Introduction

The Compliance Summary provides a systematic review of project compliance with the EBRD Environmental and Social Policy, as defined through the applicable Performance Requirements (PRs). Scope of compliance is all PRs applicable to non-FI projects. The review is intended to provide a baseline against which to judge future performance of projects through the annual environmental and social reporting process.

Between 2 and 10 indicators are identified for each of the applicable PRs: 1, 2, 3, 4, 5, 6, 7, 8 and 10.

Guidance

For all PRs (Indicators with whole number references) provide a summary of overall compliance with the PR. Justification for any derogation from a PR should be summarised and supporting documents referenced.

For each indicator within a PR, please complete the 3 steps below:

1. **Decide whether the indicator is applicable.** For Category A and B projects the starting point is that all indicators are applicable unless the project has no significant aspects relevant to the indicator (i.e. no risks), in which case the indicator should be scored "NA" and a brief summary of the reason given. For Category C projects the starting point is all indicators are NA unless the project has a significant aspect relevant to the indicator (i.e. there is a material risk).

2. **Decide whether an opinion is possible.** If not (for example if the indicator will apply, but it is too early in the project) score as "NOP" and provide a brief summary of why. Where lack of opinion represents a material omission to the review refer to where this is addressed in the report and summarise any recommendations.
3. **Score the indicator as follows and provide brief justification.**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EC</strong></td>
<td><strong>Exceeding Compliance:</strong> The project has gone beyond the expectations of EBRD’s PR requirements. EBRD should be able to use projects rated EC as a role model for positive Environmental and Social effects.</td>
</tr>
<tr>
<td><strong>FC</strong></td>
<td><strong>Fully Compliant:</strong> The project is fully in compliance with EBRD’s requirements, and EU and local environmental, health and safety policies and guidelines.</td>
</tr>
<tr>
<td><strong>PC</strong></td>
<td><strong>Partial Compliance:</strong> The project is not in full compliance with EBRD’s requirements, but has systems, processes or mitigation measure in place which are working towards addressing the deficiencies.</td>
</tr>
<tr>
<td><strong>MN</strong></td>
<td><strong>Material Non-compliance:</strong> The project is not in material compliance with EBRD’s requirements, and the systems, processes and mitigation measures in place are not working towards addressing the deficiencies.</td>
</tr>
</tbody>
</table>

4. **Comments/Issues:** Provide a brief commentary on the relevance of this requirement for the project and an explanation of the chosen score.

5. **Actions Required:** Where applicable, briefly describe any actions required by the client to achieve full compliance with each requirement. Where a relevant action is included in the ESAP for this project, please provide a reference to the ESAP.

6. **PR Summary:** Provide an overall summary against the PR, using the above compliance definitions with supporting commentary. In some cases it may be sufficient to address a PR at summary level only, depending on Stage 1 above.

**Note:** The Material Non-compliance score (at both Indicator and PR level) has significant implications for Project approval and requires particular care. In judging whether the measures sufficiently address deficiencies the consultant should consider in a structured way both the level of residual (post-approval) risk and the level of confidence that the Project can successfully bring the issue into compliance with the Policy through the ESAP. The table below illustrates the approach to be taken.

<table>
<thead>
<tr>
<th>Risk</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
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<tbody>
<tr>
<td><strong>PC</strong></td>
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<td>PC</td>
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<tr>
<td><strong>MN</strong></td>
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<tr>
<td><strong>MN</strong></td>
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<td>MN</td>
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</table>

<table>
<thead>
<tr>
<th>High</th>
<th>Medium</th>
<th>Low</th>
<th>Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>PC</td>
<td>PC</td>
<td>PC</td>
</tr>
<tr>
<td>MN</td>
<td>MN</td>
<td>MN</td>
<td>PC</td>
</tr>
<tr>
<td>KPI Ref.</td>
<td>Performance Requirement</td>
<td>Score</td>
<td>Comments/ Issues</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------------------------------------------------</td>
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<td>------------------</td>
</tr>
<tr>
<td>1</td>
<td>Assessment and Management of Environmental and Social Impacts and Issues</td>
<td></td>
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<tr>
<td>1.1</td>
<td>Environmental and Social Assessment</td>
<td></td>
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<tr>
<td>1.2</td>
<td>Environmental and Social Management Systems</td>
<td></td>
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<tr>
<td>1.3</td>
<td>Environmental and Social Policy(^6)</td>
<td></td>
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<tr>
<td>1.4</td>
<td>Environmental and Social Management Plan</td>
<td></td>
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<tr>
<td>1.5</td>
<td>Organisational Capacity and Commitment</td>
<td></td>
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<tr>
<td>1.6</td>
<td>Supply Chain Management</td>
<td></td>
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<tr>
<td>1.7</td>
<td>Project Monitoring and Reporting(^7)</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Labour and Working Conditions</td>
<td></td>
<td></td>
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<tr>
<td>2.1</td>
<td>Human Resource Policies and Working Relationships</td>
<td></td>
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<tr>
<td>2.2</td>
<td>Child and Forced Labour</td>
<td></td>
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<tr>
<td>2.3</td>
<td>Non-Discrimination and Equal Opportunity</td>
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<tr>
<td>2.4</td>
<td>Workers Organizations</td>
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</tbody>
</table>

\(^6\) Where the project represents a substantial extension to the client activities, confirm that Policy and supporting management systems and plans are appropriate for the new activities.

\(^7\) At appraisal stage there will be limited information. Compliance assessment should address specific plans for monitoring and reporting (against for example ESAP requirements) and also consider whether there is evidence of weak monitoring/reporting by client on other relevant projects - which may reduce confidence in future performance.
<table>
<thead>
<tr>
<th>KPI Ref.</th>
<th>Performance Requirement</th>
<th>Score</th>
<th>Comments/ Issues</th>
<th>Actions Required</th>
<th>ESAP Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5</td>
<td>Wages, benefits, and conditions of work and accommodation</td>
<td></td>
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<tr>
<td>2.6</td>
<td>Retrenchment&lt;sup&gt;8&lt;/sup&gt;</td>
<td>8</td>
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<tr>
<td>2.7</td>
<td>Grievance Mechanism</td>
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<td>2.8</td>
<td>Non-Employee Workers</td>
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<td>2.9</td>
<td>Supply Chain</td>
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<td>2.10</td>
<td>Security Personnel Requirements</td>
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<tr>
<td>3</td>
<td>Resource Efficiency and Pollution Prevention and Control</td>
<td></td>
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<tr>
<td></td>
<td>&lt;sup&gt;NB. Appraisal should carefully consider (and state) what regulations or standards have been applied to compliance assessment (eg EU, National, Sector Best Practice). Assessments should address consideration of the performance of alternative techniques.&lt;/sup&gt;</td>
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<tr>
<td>3.1</td>
<td>Resource Efficiency</td>
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<td>3.2</td>
<td>Pollution Prevention and Control - Air emissions</td>
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<td>3.3</td>
<td>Pollution Prevention and Control - Waste waters</td>
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<td>3.4</td>
<td>Greenhouse Gases&lt;sup&gt;9&lt;/sup&gt;</td>
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<td>3.5</td>
<td>Water</td>
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<td>3.6</td>
<td>Wastes</td>
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<td>3.7</td>
<td>Hazardous Substances and Materials</td>
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</table>

<sup>8</sup> Will not be applicable to many projects at appraisal stage. However evidence, within the last 3 years of client approach to retrenchment which is not compatible with the Policy should be taken into consideration.

<sup>9</sup> Particular attention should be given to client demonstration of consideration of alternatives. Projects expected annually to produce more than 25,000 tonnes of Co2 equivalent should provide an emission inventory and plans for annual reporting.
<table>
<thead>
<tr>
<th>KPI Ref.</th>
<th>Performance Requirement</th>
<th>Score</th>
<th>Comments/ Issues</th>
<th>Actions Required</th>
<th>ESAP Ref.</th>
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<tbody>
<tr>
<td>4</td>
<td>Health and Safety</td>
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<tr>
<td></td>
<td><strong>Summary:</strong></td>
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<tr>
<td>4.1</td>
<td>Occupational Health and Safety</td>
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<td>4.2</td>
<td>Community Health and Safety</td>
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<td>4.3</td>
<td>Infrastructure, Building, and Equipment</td>
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<td></td>
<td>Design and Safety</td>
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<td>4.4</td>
<td>Hazardous Materials Safety</td>
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<td>4.5</td>
<td>Product and Services Safety</td>
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<td>4.6</td>
<td>Traffic and Road Safety</td>
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<td>4.7</td>
<td>Natural Hazards</td>
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<td>4.8</td>
<td>Exposure to Disease</td>
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<td>4.9</td>
<td>Emergency Preparedness and Response</td>
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<td>5</td>
<td>Land Acquisition, Involuntary Resettlement</td>
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<td></td>
<td>and Economic Displacement</td>
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<td><strong>Summary:</strong></td>
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<tr>
<td>5.1</td>
<td>Avoid or minimise displacement</td>
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<td>5.2</td>
<td>Consultation</td>
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<td>5.3</td>
<td>Compensation for displaced persons</td>
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<td>5.4</td>
<td>Grievance mechanism</td>
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<td>5.5</td>
<td>RAP/LRP documentation</td>
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<td>5.6</td>
<td>RAP/LRP implementation</td>
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<td>5.7</td>
<td>Monitoring</td>
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<tr>
<td>KPI Ref.</td>
<td>Performance Requirement</td>
<td>Score</td>
<td>Comments/ Issues</td>
<td>Actions Required</td>
<td>ESAP Ref.</td>
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<td>6</td>
<td><strong>Biodiversity and Living Natural Resources</strong></td>
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<td></td>
<td><strong>Summary:</strong></td>
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<tr>
<td>6.1</td>
<td>Assessment of Biodiversity and Living Natural Resources</td>
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<tr>
<td>6.2</td>
<td>Conservation of Biodiversity</td>
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<td>6.3</td>
<td>Sustainable Management of Living Natural Resources</td>
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<td>7</td>
<td><strong>Indigenous People</strong></td>
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<td><strong>Summary:</strong></td>
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<tr>
<td>7.1</td>
<td>Indigenous People Assessment</td>
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<tr>
<td>7.2</td>
<td>Adverse Effects Avoidance and Indigenous Peoples Development Plan</td>
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<td>7.3</td>
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## ANNEX 4
### ENVIRONMENTAL AND SOCIAL ACTION PLAN TEMPLATE

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<td>1.1 Develop and implement an EMS</td>
<td>Optimisation of environmental management though a formalised system. Provide resources for training and monitoring of emissions</td>
<td>EBRD PR1 Voluntary and best practice</td>
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ANNEX 5
GUIDANCE FOR A STAKEHOLDER ENGAGEMENT PLAN

The following is an indicative list of issues for possible inclusion in a Stakeholder Engagement Plan. The Consultant is expected to use its professional judgement to determine what issues (either listed below or additional) are relevant to the Project.

A Stakeholder Engagement Plan will need to:

- Briefly identify the Project location and areas subject to impact (e.g., list of communities)
- Record what the Project is legally required to do regarding disclosure and consultation
- Identify all stakeholders, including stakeholder maps (if relevant)
- Identify any specific groups who might be considered vulnerable or need more support in the consultation process, e.g. because of their level of literacy, gender, socio-economic level, ethnicity/language, or location (e.g., proximity of the project to school, hospital, etc.). For each identified group, specify how meaningful consultation will be undertaken
- Report on any previous consultation and disclosure activities
- Define which documents will be released, including a schedule, and in what language(s)
- Define where documents will be available (physical and online addresses), e.g. provide names of specific newspapers, bulletin board locations, etc.
- Define how people will be notified of the document availability
- State the beginning and end dates of the consultation
- Provide a table or list of meetings, activities or opportunities for comment. If locations/dates are not yet known, state how people will be informed of the dates
- State who/where should comments be sent to, what will happen to them and how people will be advised of the outcomes
- Define how grievances will be handled (including a specific public grievance process)
- Define the monitoring and reporting activities for the stakeholder engagement process
- Define the responsibilities for delivering the stakeholder engagement process

The SEP should be concise and not exceed 15 pages in length, excluding annexes.

Please also see guidance note:
ANNEX 6
LIST OF INDICATIVE ISSUES FOR A NON-TECHNICAL SUMMARY

The following is a list of indicative issues for possible inclusion in a Non-Technical Summary. The Consultant is expected to use its professional judgement to determine what issues (either listed below or additional) are relevant to the Project.

Non-Technical Executive Summary

1 | Project Description
   - A concise and comprehensive description of the Project
   - Proposed construction works and subsequent maintenance/operation
   - Scheme map, where available

2 | Background
   - Rationale of the Project
   - Legal aspects and compliance with relevant environmental and social laws
   - Current environmental and social situation and considerations
   - History of the Project development and planning; including an outline of the main alternatives that were studied, their environmental and social impacts, and the reasons for making the final selection

3 | Process
   - ESIA process carried out and integration with design
   - A statement of the Project’s current state of compliance with national regulatory requirements and relevant EU requirements
   - Public consultations and disclosure and dealing with objections

4 | Summary of Environmental Benefits, Potential Adverse Impacts, Mitigation and Management Measures
   - Air quality
   - Associated infrastructure
   - Biodiversity and nature conservation
   - Consistency with policy, law and other plans
   - Cumulative impacts
   - Induced (indirectly consequential) impacts
   - Land use planning and changes
   - Landscape and visual impacts
   - Raw material sourcing and transportation, including borrow pits
   - Road safety
   - Traffic, noise and vibration
   - Waste management
   - Water resources
5 | Summary of Social Benefits Potential Adverse Impacts, Mitigation and Management Measures

- Community impacts
- Contractor management, including the siting and management of worker camps
- Cultural heritage
- Disruption and public health and safety during construction
- Impacts on businesses and employment
- Impacts to existing infrastructure and public services
- Labour issues and standards
- Land acquisition and resettlement (cross reference any resettlement report that is being developed)
- Local traffic and access impacts
- Occupational and public health and safety issues
- Socio-economic impacts; including vulnerable groups (taking into account gender specificities and needs)

7 Communications

- Contact details
- Process for addressing any issues arising
- Link to Stakeholder Engagement Plan (or similar)