

TURKEY

SUSTAINABLE CITIES PROJECT (P128605)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

--DRAFT EXECUTIVE SUMMARY--

August 25, 2014

TURKEY

THE SUSTAINABLE CITIES PROJECT

EXECUTIVE SUMMARY

1. The Project Description

Iller Bank (Turkey's Bank of Provinces) and The World Bank (WB) designed the Sustainable Cities Project (SCP) to establish a support mechanism for participating second tier Metropolitan Municipalities (MM) to plan and invest in a sustainable future. The SCP will establish a support system for developing cities to identify, prepare and finance bankable investments and enhance city planning capacities aimed at supporting this objective. The investments carried out through the SCP will adhere to both the Republic of Turkey Environmental Regulations and the World Bank Safeguard Policies. In order to do so, the Iller Bank (IB) will act as the financial intermediary to ensure that related WB policies and procedures are followed and ensure that all Turkish environmental approvals, licenses and permits have been secured.

Previously, the WB has financed a similar project called the Municipal Services Project (MSP), through the IB. Heretofore the MSP successfully provided financing in three specific areas, including water supply, wastewater and solid waste investments for 12 participating municipalities and 2 water utilities. In this respect, the SCP will be a second generation operation that supports up to eight eligible municipalities, while targeting the same investment priority areas, as well as emerging investments needs in urban transport and energy efficiency. This second generation operation will provide a more dedicated focus to urban planning systems, recognizing the importance of urban planning to the sustainability of Turkey's cities.

Project Objectives

The primary objective of the Sustainable Cities Project (SCP) is for participating metropolitan municipalities to incrementally improve their environmental, financial/economic and social sustainability. Sustainability measures include: reducing unaccounted for water losses by water utilities, decreasing the discharge of untreated wastewater into the environment, reducing electricity consumption through energy efficiency improvements, lowering traffic congestion, air pollution and carbon emissions by improving public transport and increased options for pedestrian mobility, strengthening municipal finances and financial planning, and expanding social participation and services to those parts of the province that do not benefit from network services.

SCP will feature three Components as follows:

Component A: Sustainable City Planning and Management Systems

This component, with an indicative grant financing amount of EUR 25 million (subject to EU approval of an IPA2 funding request) will provide financing for Metropolitan Municipality technical assistance needs to improve planning tools and practices. Technical assistance will support *inter alia*, land use planning at different scales, transport masterplanning using the sustainable urban mobility planning (SUMP) approach, energy efficiency and renewable energy planning, strategic environmental assessments (SEA) and other measures within an Integrated Metropolitan Municipality Planning Framework. This will include support for preparing a Provincial Territorial Plan (1:25,000 scale), which is a requirement of new Metropolitan Municipalities for the first time. Planning support will be provided as well, where there is need and demand, for an update of the Master Plan (1:1,000 scale), an urban transport master plan, a strategic environmental assessment, among other planning tools. For municipalities seeking to update their systems for monitoring infrastructure services, a fully-developed GIS will be prepared. A multiyear Capital Investment Plan (CIP) would also be prepared, reflecting investment needs in accordance with land use planning in the masterplan. Public consultations will take place within all phases of the planning work to promote civic engagement and social sustainability.

Component B: Municipal Investments

This component, with an indicative financing amount of US\$ 300 million (World Bank and AFD financing¹), will provide support for infrastructure service investments to participating metropolitan municipalities. Eligible expenditures under this component will be for municipal water, wastewater, solid waste, urban transport, and energy efficiency/renewable energy investments. The Project will also help cities to use evidence-based methods² to identify investment priorities that promote their sustainability and to monitor and track improvements over time. Financing will be provided at competitive interest rates and long-term maturities not currently available in the market.

Component C: Project Management and Institutional Capacity Building

This component, with an indicative financing amount of US\$1 million, will cover the costs of overall Project implementation including outsourcing by Iller Bank for consulting services

AfD (Agence Francaise de Developpement) is a potential co-financier of the project with up to EUR 150 million additional cofinancing, depending on municipal demand. The Bank's Safeguard policies will apply to all SCP investments under an envisioned joint co-financing from AFD.

² Evidence-based methods include collection of baseline performance data on energy efficiency, water and wastewater services, etc. and agreeing on performance target improvements against appropriate benchmarks.

necessary to carry out Iller Bank’s Project monitoring, evaluation and supervision functions, fiduciary and safeguard responsibilities, Sustainable Cities Diagnostics and mobilization of sector specific expertise for relevant advisory services. The Component would also support Iller Bank in equipping and strengthening its new units in the Spatial Planning Department for urban transport and energy efficiency as needed. Iller Bank may also seek to use some financing for internal staff training, capacity building, and system development in the desired areas.

Potential Investment Fields for SCP

Field	Objective/ Scope
Water	Upgrading, rehabilitating and expanding of water supply systems to accompany urban growth and redevelopment.
Wastewater	Expanding and rehabilitating collection networks, to ensure sewerage coverage in developing urban areas; separation of sewerage and stormwater drainage networks as appropriate, investing in new wastewater treatment capacity, including for sludge management, in pursuit of environmental policy objectives.
Solid Waste	Integrated solid waste management systems, including transfer, sorting, recycling and disposal (e.g. landfill development)
Urban Transport	Financing to support public transit systems (Bus Rapid Transit, zero-emission Trolley Buses) parking facilities, transport system management improvements, pedestrianization (improved or expanded walking or bike paths and sidewalks)
Energy Efficiency & Renewable Energy	Energy efficient systems in urban transport and municipal infrastructure systems; energy efficient buildings, solar fields, geothermal heating of buildings.

2. Purpose of the Environmental and Social Management Framework

The World Bank’s environmental and social safeguards policies require that the borrower country is expected prepare an Environmental and Social Management Framework (ESMF), integrated with the Regulation on Environmental Impact Assessment (henceforth “EIA Regulation”) (Official Gazette No. 26936, October 10, 2013) and WB’s Operational Policy for Environmental Assessment (OP 4.01) for the SCP. Since the sub-project locations under the SCP are not known at the time of appraisal, ESMF is the key document to be shared with stakeholders before implementation starts.

The ESMF forms a scope of the comprehensive environmental and social management approach that has been adopted for acknowledging the potential environmental and social impacts from the SCP. The ESMF seeks to consolidate and facilitate understanding of all necessary policy and regulatory features of the Turkish Government as well as the World Bank's environmental and social safeguards policies that are applicable to the project. Currently, the details (location, dimension and design) of the SCP are not definite. Therefore, the detailed assessment of possible social and environmental impacts of the Project is not achievable at this time. However, the ESMF will cover the entire related environmental and social framework from the previous MSP project and include the impacts of the new financing options as well.

The ESMF serves as an overall and systematic guide covering policies, procedures and provisions that are to be integrated with the overall project period to ensure that the social and environmental issues are systematically addressed at the sub-project stage. Furthermore, the ESMF provides technical inputs and guidance for the SCP from an environmental and social management perspective. Therefore, the application and implementation of the ESMF will guide the integration of social and environmental aspects into the decision making process of all stages related to planning, design, execution, operation and maintenance of sub-projects, by identifying, preventing and /or minimizing adverse social and environmental impacts early – on in the project cycle.

Integrated Provincial Territorial Planning Framework (IPTPF). The IPTPF, supported under Component A, is designed to help the new metropolitan municipalities (MM) to update their urban planning tools and practices through technical assistance and capacity building. The IPTPF, in addition to strengthening and linking urban land use planning with transport planning and other environmental planning considerations, will build upon and contribute to developing an accurate, reliable and continuously updated urban database in terms of economic, social and financial aspects of the participating municipalities. Analysis and monitoring of data will be used for further planning, implementation and monitoring purposes. All of the investment options provided by the IB and WB would have strong connections with building efficient urban infrastructure systems and services. A particular focus will be given to sustainable urban mobility planning, taking into consideration the rising congestion costs, deteriorating air quality and carbon emissions that accompany rapidly increasing private vehicle ownership rates. Within the IPTPF structure, preparation of a Strategic Environmental Assessment (SEA) will also be an option, and an important consideration relevant to WB Operational Policy 4.01 (OP 4.01).

The World Bank follows the Organization for Economic Co-operation and Development (OECD) in describing Strategic Environment Assessment (SEA) as “analytical and participatory approaches to strategic decision-making that aims to integrate environmental considerations into policies, plans and programmes, and evaluate the inter-linkages with economic and social considerations”. Originally, SEA was designed as an extension of Environmental Impact Assessment (EIA) of projects to plans, programs, and policies. Over time SEA has become more strategic by bringing different groups of stakeholders into an environmental and social dialogue in an iterative and adaptive way. For most countries, SEA legislation falls under and extends existing EIA legislation to programs and plans. Many developing countries have recently adopted legislation or regulations on SEA, and the use of this assessment tool is increasing rapidly.

In the European Union, SEA is a legally enforced assessment procedure required by Directive 2001/42/EC (known as the SEA Directive). The SEA Directive aims at introducing a systematic assessment of the environmental effects of strategic land use related plans and programs. It typically applies to regional and local development, waste and transport plans, within the European Union. In this context, a draft SEA Regulation has been prepared by Ministry of Environment and Urbanization (MoEU) as a part of association period. The aim of MoEU is to put SEA Regulation into force within the coming three years period. In this SEA Regulation development period, case studies will be carried out by MoEU in four specific sectors namely energy, water, transportation and agriculture.

Although Turkish legislation is currently in a stage of adopting SEA as a requirement, Municipalities that seek to voluntarily prepare SEA within this period will already accomplish the expected legal obligations, as SEA will eventually become a legal requirement.

1. Application of the Turkish EIA Regulation and WB EA Policy

Under the World Bank EA system (OP. 4.01) projects are classified as Category A, Category B or Category C depending upon estimated potential environmental risk. Unlike the WB categorization system, Turkish EIA regulation (same as EU EIA Directives) indicates threshold based project descriptions through Annexes. One of the main differences between two environmental processes (WB EA and Turkish EIA policies) can be seen in screening system of the projects. The differences between the Turkish EIA procedure and WB's Operational Policy for Environmental Assessment (O.P. 401) can be seen in Table – 1.

Since the screening systems differ when compared to national EIA regulation, it is not technically very easy to cross-match the project screening among national and WB system.

For example, it cannot be assumed that Annex I under the national system equates directly with World Bank Category A or Annex II with Category B. The differences in the two systems may arise, and it is possible for some Annex I projects to be considered Category B, or conversely, some Annex II projects to be considered Category A if for example they are planned in sensitive areas. Likewise, some No Annex projects may be screened as Category B especially if they could lead to modest negative impacts to the human or natural environment and the impacts confined to a small region and are temporary or short-lived and these impacts are easy and inexpensive to control (e.g. most of the construction activities). In order to avoid repeating the same steps for both procedures, the Project will be carried out to meet the WB OP 4.01 requirements that are not contained in the Turkish EIA or PIF, but are required by the WB will be prepared in the form of “supplementary documents” to the Turkish EIA.

The lists of procedures are presented in order below.

a) Screening

IB, in consultation with WB, will carry out the screening of subprojects in terms of Category A or, B or C. IB will classify a subproject as Category A if even one of the criteria is assessed to carry “high risk”. If none of the criteria is found to carry high risk but at least one has “modest risk”, then the subproject will be classified as Category B. If all of the criteria of a subproject are found to carry “minor or no risk”, then the project is classified as Category C. In this process IB may ask consultants preparing the subproject feasibility reports to carry out an initial assessment of these risks to reach more informed decisions.

As it is described above, Category B covers any project which is not sufficiently complex and risky to require a full, comprehensive EIA (addressing a wide range of potential issues and including up-to-date environmental baseline data and a detailed analysis of alternatives), but does require some analysis of potential environmental impacts in order to be able to identify appropriate mitigation measures and monitoring indicators. According to the significance of the limited impacts of Category B projects different types of EA documentation could be required. The IB will assess whether the impacts are more significant than a low risk Category B project and then decide if a partial environmental assessment (EA)³ will be necessary instead of an environmental and social management plan (ESMP).

³ For projects which may need a partial EA, the format will be similar to an elaborated ESMP. The project description section, impacts and mitigation sections should be more detailed in order to provide clear explanation

b) Environmental Assessment

The type and content of the environmental assessment that fulfill WB OP 4.01 will depend on the category and special issues associated with the project as discussed above. A large part of the information and analysis is likely already available in the EIA or PIF document if the proposed subproject is classified as either an Annex I or an Annex II project according to the Turkish EIA Regulation. Along with supplementary documents, the Turkish EIA will be submitted and disclosed to the WB together with the Turkish EIA translated to English.

c) Public Consultation

For Category A projects, two public consultations that are consistent with WB policy would be necessary to carry out.

For Category B Projects, a public consultation meeting will be held for Category B subprojects at the draft EA / ESMP stage whether or not PIF is available. This is because the Turkish EIA Regulation does not require public consultation for projects that are not subject to EIA whereas WB policy requires at least one consultation meeting.

d) EIA Expert Selection and Terms of Reference (TOR)

For Category A subprojects, IB will submit the TOR that have been discussed in the Public Consultation for the EIA to WB for review and clearance prior to selection of an expert, and IB will ensure that the expert selected is independent of the project proponent.

e) World Bank Clearance

The WB will review and provide no objection to all projects required by Turkish regulation to prepare an EIA and/or assigned "Category A" in accordance with WB procedures before a final decision to fund the subproject can be taken by IB.

The WB requires 'no objection' for any Category B subprojects. IB can review and clear the partial EAs and/or ESMPs after approving to fund the subproject but before any physical construction has started and/or any commitments to purchase equipment have been made.

f) Incorporation in Works Contracts

Sub-loan agreements must include requirements to implement the ESMP. For both Category A and Category B projects, the ESMP will also be attached to the procurement documents and be part of the contract with the contractor selected to carry out the subproject works. These sections include potential impacts that may

about the significant of the impacts and the residual impacts after mitigation. The necessity of preparing a partial EA instead of an ESMP and the format of a partial EA will be decided by consulting the WB.

occur during the set of works in question and measures that the contractor needs to take to mitigate them.

g) Disclosure

For both Category A and B projects, the municipality will ensure that hard copies of the final Turkish language WB EIAs and ESMPs are available in public place¹. The IB will post the final documents on its website. In addition, the final EIA report for Category A projects should be disclosed to public during the second public participation meeting. In case of Category A subprojects and the first three Category B subprojects disclosure in Turkey must be complete before WB can provide the 'no objection' to its financing.

h) Monitoring

IB will carry out regular supervision of subprojects during construction and operation to ensure that the ESMP is being duly carried out. When IB notices any problems in ESMP implementation it will inform the relevant municipality and agree with them on steps to rectify these problems. IB will report its findings to the WB in its biannual project progress report or more frequently, as needed to bring issues to the attention of the World Bank. The WB project team will on occasion, and as required, also visit project sites as part of project supervision.

Table -1 Turkish and WB Requirements and Key Differences .

Steps	Turkish Regulation on EIA	World Bank O.P.4.0.1
<p>Screening</p>	<p>The EIA Regulation classifies the proposed projects into two categories as;</p> <ol style="list-style-type: none"> 1. Annex I Projects: The projects that have significant potential impacts. 2. Annex II Projects: The projects that may or may not have significant effects on the environment. 	<p>Under the O.P. 4.0.1, the proposed projects are classified under three categories as;</p> <ol style="list-style-type: none"> 2. Category A: These types of projects would have significant adverse environmental impacts that are sensitive, diverse or unprecedented. 3. Category B: These types of projects might have some adverse environmental impacts, but less adverse than those of Category A projects. <ol style="list-style-type: none"> i) Category B projects divides in two within its structure as B and B+ projects. Category B+ projects have relatively more impacts and mitigation measures comparing to Category B projects, yet the impacts and mitigation measures are not significant enough to be recognized as Category A projects. 4. Category C: These types of projects are likely to have minimal or no adverse environmental impacts. <p>When a WB-funded project involves a series of subprojects which are selected and funded by a Financial Intermediary (FI) using WB loan proceeds, the project is classified as Category FI.</p>

<p>Public Consultation Meeting</p>	<p>For projects that require the preparation of an EIA, the Governorate is required to inform the public that a project application has been submitted in a specified locality, that the EIA process has begun and that the public may submit its comments and suggestions to the Governorate or MoEU.</p>	<p>For all Category A and B subprojects proposed for WB financing, during the EA process, the borrower consults subproject-affected groups and NGOs about the subproject's environmental aspects and takes their views into account.</p>
<p>Scope of Environmental Assessment</p>	<p>The project proponent presents a Project Introduction File (PIF) for Annex II projects and the PIF outline for Annex I projects to a commission which comprises representatives of MoEU and relevant organizations as identified by MoEU. Based on the information submitted, the commission determines the scope of the EIA of the proposed project.</p>	<p>For Category A subprojects the borrower is required to prepare an EIA which examines the subproject's potential negative and positive environmental impacts, compares them with those of feasible alternatives, and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.</p> <p>For Category B projects, this information may be contained in an Environmental and Social Management Plan (ESMP) only unless there are site-specific issues which necessitating a site-specific assessment in addition to the ESMP. If the project is recognized as B+, then partial EA document or partial Environmental and Social Impact Assessment (ESIA) is required to satisfy the expected requirements.</p>
<p>Review and Approval of the EA</p>	<p>The commission reviews the draft version of the EIA report. The final EIA report which incorporates the commission's assessments is then submitted to the MoEU for final review. MoEU determines whether the</p>	<p>In FI projects, the responsibility to ensure that OP 4.01 requirements are met rests with the FI. The EA process should normally be completed prior to the FI's approval of a subproject for financing with a WB loan.</p>

	<p>“EIA is positive” in which case the project proponent may implement the project or “EIA is negative” in which case the project may not go any forward.</p>	
<p>Disclosure</p>	<p>The draft EIA report is made available to the public for comments at Central MoEU or provincial directorate. After MoEU’s final evaluation of the EIA report, the Governorate announces to the public MoEU’s decision together with its justifications. Disclosure of the final EIA document is not foreseen in the EIA Regulation.</p>	<p>For Category A subprojects the FI must make the draft EIA report available at a public place accessible to subproject-affected groups and local NGOs.</p> <p>After the EIA of a Category A subproject is finalized, the FI transmits to WB an English language copy of the final report including an English language executive summary. The WB distributes the executive summary to its executive directors and makes the report available through its InfoShop.</p> <p>In case of Category B subprojects, the FI transmits to WB the final English language Category B EA report and WB makes it available through its InfoShop.</p>
<p>Implementation, Monitoring and Inspection</p>	<p>According to the EIA Regulation, MoEU monitors and inspects projects that were assessed either “not to need an EIA” or “to have a positive EIA” based on provisions specified in the PIF or the EIA, respectively. Furthermore, the project proponent is obliged to submit monitoring reports to MoEU which transmits them to the Governorate for disclosure to the public</p>	<p>During subproject implementation, the FI reports to WB on (a) compliance with measures agreed with the Bank on the basis of the findings and results of the EA, including implementation of the ESMP; and (b) the findings of monitoring programs. The Bank bases supervision of the project’s environmental aspects on the findings and recommendations of the EA, including measures set out in the legal agreements, any ESMP, and other project documents.</p>

5. Environmental Assessment Status Reporting to the World Bank

In its biannual project status reports, IB will include a section titled “Environmental Safeguards” which will summarize the status of ESMP implementation based on its monitoring activities. The report will highlight any issues arising from non-compliance and how it has been/is being addressed and from the triggering of OPs listed below as;

- *Natural Habitats (OP 4.04);*
- *Physical Cultural Resources (OP 4.11);*
- *International Waterways (OP 7.50);*
- Indigenous Peoples (OP 4.10);
- Safety of Dams (OP 4.37);
- Physical Cultural; and,
- Other World Bank Safeguards.

The triggering of OP 4.04, OP 4.10, OP 4.11, or 4.37 may necessitate upgrading of the project Category from B to B+ or A if the potential impact is significant or, in the absence of an upgrade, the preparation of a site-specific EA. In either case, unless an alternative site is chosen, IB will ensure that measures to mitigate the impact of the subproject are incorporated in the ESMP. With regard to OP 7.50, IB is responsible for ensuring that the sub-projects financed are located and dependent on national waterways only. The waterways identified as NOT an international waterway (do not trigger OP 7.50) in Turkey are the following: Susurluk, North Aegean, Gediz, Kuçuk Menderes, Buyuk Menderes, Western Mediterranean, Antalya, Sakarya, Western Black Sea, Yesilirmak, Kizilirmak, Konya Kapali, Eastern Mediterranean, Seyhan, Ceyhan, Eastern Black Sea, Burdur, Afyon, Orta, Anadolu, and Van.

For Involuntary Resettlement Policy (OP 4.12), Iler Bank will prepare a separate document (Land Acquisition and Resettlement Policy Framework - LARPF, etc.) before appraisal and that will also be shared with public. OP 4.12 compliance will be monitored via semiannual reports in order to closely follow project implementation consistency with the relevant safeguard documents (LARPF, etc.)

6. Institutional Arrangements

Key actors in the implementation of this framework are the IB Project Management Unit (PMU) and project proponent municipalities.

Iller Bank PMU

IB PMU will continue to include the Environmental Specialists to coordinate the implementation of the Environmental Framework. The Environmental Specialists will monitor subprojects and provide the necessary guidance on preparation of Category A and Category B EA documents in accordance with the WB requirements. Furthermore, the Environmental Specialists will supervise the municipality officials for WB safeguard requirements, consult the ESMP implementation and monitor the comments and concern mechanism of the affected groups.

Municipalities

Usually, the municipalities have the capacity to properly implement ESMPs (for both Category A and B) during the construction and operational phases. Where such capacity is lacking⁴, the municipalities will be assisted by Environmental Specialists to supervise the works carried out by the contractor and ensure that the ESMP is followed adequately.

7. Environmental and Social Monitoring and Grievance Mechanism

Environmental and Social Monitoring

The environmental and social issues will be monitored by the appointed specialists from the IB to prevent any potential negative social and environmental impacts from the implementation phase of the project to the operational phase.

The Environmental Monitoring System will cover the following,

- General Environment
- Air Emissions
- Soil
- Surface water and groundwater
- Biodiversity
- Noise and dust emissions
- Social Monitoring

Grievance Mechanism

Through the Grievance Mechanism, all public complaints will be addressed, documented by the related municipalities and investigated by the IB officers. The Grievance Mechanism is a

⁴ The capacity of the participating municipalities will be done by the PIU (IB) in close collaboration with WB.

process that enables any stakeholder to make a complaint or a suggestion about the way a project is being planned, constructed or implemented.

In order to prevent possible negative impacts and receive the comments or concerns of the stakeholders, the municipalities will establish a transparent and comprehensive Grievance Mechanism prior to implementation of the project.

The Grievance Mechanism will be prepared according to existing EIA and WB policies, laws and regulations.

The White Table System

The White Table system is adopted by all municipalities to collect requests and complaints of the local residents and provide possible solutions within the municipal structure. Although the White Table system is not considered as a grievance mechanism, it is still acknowledged as a general complaint mechanism that the municipalities adopted within their structure. Therefore, the White Table system can be either proceeded as the actual or additional complaint mechanism for the selected projects since the selected projects are already within the municipality structure. The White Table system can be accessed through the call center, web page or in person.

8. Measurement Basis of EIA

The EIA is expected to identify the direct or indirect effects of a project by following categories; physical environment, biological environment and social environment respectively. The adverse environmental and social issues relating to implementation of the project are provided in checklists for each project options in ESMF. The table below is a checklist sample for water treatment and supply project used in ESMF.

Environmental Component	Possible Impacts	Mitigation Measures
<i>Physical Environment</i>		
Soils and Land	<ul style="list-style-type: none"> • Damage to soil structure due to material storage, construction traffic, etc. • Loss of topsoil during excavation or disposal of construction materials • Effects of excavation for/disposal of soil and other materials • Erosion due to uncontrolled surface run-off and wastewater discharge • Damage to land during construction • Landslips on embankments or hillsides 	<ul style="list-style-type: none"> • Protect non-construction areas, avoid work in sensitive areas during highly adverse conditions, provide temporary haul roads as appropriate, restore damaged areas • Design works to minimize land affected • Strip topsoil where necessary, store and replace post construction • Design drainage and other disposal facilities to ensure soil stability and appropriate treatment • Design slopes & retaining structures to minimize risk, provide appropriate drainage, soil stabilization/vegetation cover • Take/dispose of materials from/at approved sites

Environmental Component	Possible Impacts	Mitigation Measures
Water Resources ⁵	<ul style="list-style-type: none"> • Over-exploitation, causing changes in resources, flow patterns, etc., with possible impact on downstream users/ users elsewhere (if groundwater) • Interruption of surface and underground drainage patterns during and post construction, creation of standing water. • Contamination/pollution of resource and/or supply by construction, human and animal wastes, including fuel & oil, hazardous wastes, wastewater, etc. 	<ul style="list-style-type: none"> • Determine sustainable use/yield (test as required) • Careful design - maintain natural drainage where possible, provide suitable wastewater drainage, safe/sanitary disposal of hazardous wastes • Careful design, adequate protection from/control of livestock; agriculture, casual human contact, hazardous materials - fuel (including storage), etc.
Air Quality	<ul style="list-style-type: none"> • Dust and fumes during construction • Impacts from water treatment 	<ul style="list-style-type: none"> • Control dust with water, control construction methods and plant, timing of works, vehicle speeds • Minimize major works inside communities • Appropriate design, training in O&M, safety

⁵ As per OP 7.50 on International Waterways, IB commits itself not to carry out any water supply subproject that involves new water extraction in basins connected with an international waterway (see Box 1 in main text). Hence issues related to extraction of water apply only to subprojects that are not connected with an international waterway.

Environmental Component	Possible Impacts	Mitigation Measures
Acoustic Environment	<ul style="list-style-type: none"> Noise disturbance from construction works, pump stations (if near house/s) 	<ul style="list-style-type: none"> Time work to minimize disturbance Use appropriate construction methods & equipment Restrict through-traffic in residential areas Careful siting and/or design of plant, provide noise barriers e.g. embankments of waste soil
<i>Biological Environment</i>		
Natural Habitats ⁶	<ul style="list-style-type: none"> Disturbance of natural habitats from construction, e.g. dust, noise, un-seasonal working, poor siting of new works, disposal of untreated wastes, etc. Changes in water resources regime 	<ul style="list-style-type: none"> Careful siting, alignment, design of pipelines and structures, and/or timing of works (seasonal) Select disposal areas and methods carefully Protect sensitive areas within/close to site
Fauna and Flora	<ul style="list-style-type: none"> <i>Population decrease</i> <i>Decrease in habitat</i> 	<ul style="list-style-type: none"> Careful siting, alignment and/or design to minimize impacts, especially for any sensitive/rare species Planning the timing of works to avoid sensitive periods (such as nesting, spawning, etc.) Select appropriate construction methods Protect sensitive areas within/close to site

⁶ As mentioned before, any subproject which might significantly impact / degrade a natural habitat (i.e. trigger OP 4.04) will be ineligible for financing these mitigation measures are therefore only for situations where no significant impact on natural habitats is anticipated.

Environmental Component	Possible Impacts	Mitigation Measures
Social Components	<ul style="list-style-type: none"> • Concerns and complaints of affected communities • Cultural Property • Traffic and public safety • Other concerns and complaints 	<ul style="list-style-type: none"> • Consultation on risks and adverse impacts of the project and create opportunities to receive affected communities view on project. • The Project will avoid projects that may have adverse impacts on or limit access to physical cultural resources. • Establishment of grievance mechanism to collect and facilitate resolution of affected communities concerns and grievances regarding of the client's environmental and social performance. • Transparent public disclosure to inform each phase of the project through web-site, notice boards, telecommunication tools and public meetings. • Establishing well designed and structured public questionnaire to receive feedback from affected communities • Safety exclusion zone will be established around the Project area • Traffic management procedure will be prepared if necessary avoid or minimize the negative impacts. • Construction will be confined to normal work hours, if construction must be conducted before/after these hours, local public will be notified in advance.

Environmental Component	Possible Impacts	Mitigation Measures
Aesthetics and Landscape	<ul style="list-style-type: none"> • Local visual impact of completed works and some intrusions into general manmade and natural landscape, loss of trees, vegetation, etc. • Noise, dust, wastes, etc., during and post construction 	<ul style="list-style-type: none"> • Careful siting and design of works, screening of intrusive items • Replace lost trees, boundary structures, etc., re-vegetate work areas • Careful de-commissioning of construction areas and disposal of wastes • See also Soil, Land, Air Quality and Acoustic
Human Health	<ul style="list-style-type: none"> • Health and safety hazards during and post construction • Health impacts and diseases from hazardous construction materials wastes, contaminated water, improper water treatment 	<ul style="list-style-type: none"> • Appoint experienced contractors. Incorporate safety and environmental requirements in contract documents. Provide information on mitigating measures. Capacity building to emphasize need for safe working, good supervision, careful planning and scheduling of work activities, involve communities, fence hazardous areas • Correct design and adequate training in O&M of plant, safety procedures, water testing, etc. • Correct disposal of waste

Environmental Component	Possible Impacts	Mitigation Measures
Historical / Cultural Sites	<ul style="list-style-type: none"> Disturbance/damage/degradation to known and undiscovered sites 	<ul style="list-style-type: none"> Careful siting/alignment of works; special measures to protect known resources/areas Immediately halt work in vicinity of discoveries, pending instructions from relevant authorities

9. Suggested Formats

An Environmental Impact Assessment (EIA) report focuses on potential environmental issues of a proposed project. The structure of the report should include not only the potential effects of the project; it should also provide mitigation measures for each possible impact. The items that are expected in EA report are listed below for reference (not necessarily in the order given):

- (a) *Executive Summary.* This summary should summarize the significant findings and recommended actions of the project.
- (b) *Policy, legal, and administrative framework.* The framework should include policy, legal and administrative requirements which EA is expected to carry out.
- (c) *Project description.* This section describes the proposed project and its geographic, ecological, social, and temporal context, including any supporting infrastructure that may be required.
- (d) *Baseline data.* The data provides the dimensions of the study area and describes relevant physical, biological, and, socioeconomic conditions, including any changes anticipated before the project commences.
- (e) *Environmental Impact.* The project's possible positive and negative impacts will be predicted and assessed.
- (f) *Analysis of alternatives.* Systematically compares feasible alternatives to the proposed project site, technology, design, and operation--including the "without project" situation--in terms of their potential environmental impacts.
- (g) *Environmental and Social Management Plan (ESMP).* The ESMP covers mitigation measures, monitoring and instructional stringing of the project.
- (h) *Appendixes.* This section will include (i) list of EA report preparers, (ii) references, (iii) record of interagency and consultation meetings, (iv) the tables presenting the relevant data referred to or summarized in the main text and (v) list of associated reports.