Environmental Assessment and Review Framework

Project Number: 47282-008
October 2018

Afghanistan: Energy Supply Improvement Investment Program (Tranche 5)

Prepared by the project preparatory consultant, on behalf of Da Afghanistan Breshna Sherkat of the Government of Afghanistan, for the Asian Development Bank.

CURRENCY EQUIVALENTS
(as of 04 October 2018)

Currency unit	–	afghani (AF)
AF1.00	=	$0.0132
$1.00	=	AF75.76

ABBREVIATIONS

ADB	—	Asian Development Bank
SC	—	supervision consultant
DABS	—	DA Afghanistan Breshna Sherkat
EA	—	environmental assessment
EARF	—	environmental assessment and review framework
EIA	—	environmental impact assessment
EMP	—	environmental management plan
GFP	—	grievance focal point
IEE	—	initial environmental examination
MEW	—	Ministry of Energy and Water
MFF	—	multitranche financing facility
NGO	—	non-government organization
PMU	—	project management unit
SPS	—	Safeguard Policy Statement
WHC	—	World Heritage Convention

NOTES

(i) The fiscal year (FY) of the Government of the Islamic Republic of Afghanistan and its agencies ends on 20 December. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2017 ends on 20 December 201.

(ii) “$” refers to US dollars

TABLE OF CONTENTS

I. INTRODUCTION

1. Investment Program. Afghanistan is globally among the lowest 10% in per capita energy consumption and is a net energy importer. In 2014, more than 80% of its total power demand was met from Iran (17%), Tajikistan (25%), Turkmenistan (12%), and Uzbekistan (27%), with remaining 19% met through indigenous sources. Although significant renewable energy and fossil fuel resources exist, these need to be developed through public and private investments. In 2014, nearly 97% of country's oil needs were imported. Infrastructure deficit in gas sector restricts identified reserves of 75 billion cubic meters within 150 square kilometers area only. Power remains a growing portion of total energy consumption and connection rates have increased from 7% in 2003 to 30% in 2014 when demand was 750 megawatts (MW) and power consumption was 3,700 gigawatt-hours (GWh). Energy demand in major cities is growing by 25% every year and by 2032, demand is forecast to reach 3,500 MW and electric consumption at 18,400 GWh. Meeting this exponential increase in demand requires boosting all viable import options in parallel to harnessing domestic resources. The key challenges are: (i) lack of generation capacity, (ii) increasing constraints in transmission and distribution systems, (iii) weak financial management and sustainability of sector entities, and (iv) inadequate corporate governance structures.

2. In this context, the MFF investment program will augment energy trade and regional cooperation, strengthen country's energy infrastructure, increase energy supply to accelerate electrification rate, and improve operational efficiency in the sector. In the power subsector, generation (conventional and renewable), transmission (domestic and regional), and distribution (on- and off-grid) projects are proposed; while wells rehabilitation and gas to power conversion projects are proposed in gas subsector. Current lack of energy supply and demand-supply imbalance in Afghanistan constrains economic growth and opportunities; creates disparities in economic development; and fuels ethnic and regional tensions, insecurity, and discontent. An MFF instead of a stand-alone project is proposed for investment because (i) tranches will be programmatically aligned and sequenced with government's National Energy Supply Program (NESP), (ii) program will be showcased to explore and confirm cofinancing options, (iii) continuity in combining investments in energy infrastructure and nonphysical components for integrated energy sector development will be ensured, and (iii) to allow neighboring countries to develop regional projects for transit and trade into Afghanistan and beyond.

3. To adequately screen, assess, review, and monitor the environmental impacts of candidate subprojects under tranches of the proposed MFF, an Environmental Assessment and Review Framework is presented below. It includes assessment of legal framework and institutional capacity, anticipated environmental impacts, environmental assessment of subprojects and components, consultation, information disclosure, and grievance redress, institutional responsibilities, and monitoring and reporting.

II. ASSESSMENT OF LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY

A. Environmental Legislation of Afghanistan

4. The environmental assessment of the subprojects under various tranches of the MFF Investment Program will be undertaken with in compliance with the ADB's and the national policies, legislation and requirements. This also includes complying with international agreements which Afghanistan is party to.

5. The following national environmental acts, laws, regulations, guidelines and policies are relevant to the project:

- Environmental Act, 2007. This act has been promulgated to give effect to Article 15 of the Constitution of Afghanistan and provide for the management of issues relating to rehabilitation of the environment and the conservation and sustainable use of natural resources, living organisms and non-living organisms.
- Minerals Law, 2010. The Minerals Law of 2010 governs the ownership, control, prospecting, exploration, exploitation, extraction, marketing, sale, and export of minerals in the territory of Afghanistan. The law provides that all deposits of minerals on or under Afghanistan or in its water courses are the exclusive property of the state. A surface land interest does not include right to minerals. The Ministry of Mines is authorized to grant mineral rights in accordance with the provisions of the law.
- Water Law, 2009. Afghanistan's new Water Law became effective in April 2009 and is one component of the country's strategy to integrate its water systems and institutions. The Water Law adopted a river basin approach under which natural river basin boundaries (versus administrative boundaries) govern all aspects of natural resources management and planning. Customary law tends to govern the use of water on private land and in private systems, the resolution of conflicts over water, and water resource conservation. Customary law generally governs allocation of water through the kaerez system, which is constructed and maintained on a community basis.
- Law on Managing Land Affairs, 2008. The Law on Managing Land Affairs sets out definitions for various land types and classifications, requirements for land deeds, and principles governing allocations of state land, land leasing, land expropriation, settlement of land rights, and restoration of lands.
- Draft Rangeland Management Law, 2009. The Rangeland Law is currently under development. Its purpose is to create a framework for community custodianship and management of rangeland resources to provide for sustainable use and management of the rangeland resources, to maximize productivity of rangeland resources and to maintain ecological functions and evolutionary processes of Afghan rangelands, conserve soil and water resources, maintain biological diversity, and combat desertification.
- Forest Law, 2009. The Draft Forest Law reflects the principles of community based natural resource management enshrined in the Cabinet-endorsed National Strategy for Forests and Rangeland.
- Environmental Impact Assessment Regulations (Official Gazette No. 939, dated 10 March 2008). These regulations are issued in accordance with Article 22 of the Environmental Law to govern the process of environmental impact assessment. These regulations describe screening (Regulation 5) and environmental assessment (Regulation 7).
- Administrative Guidelines for the Preparation of Environmental Impact Assessments, June 2008. These guidelines have been prepared as a companion to the Environmental Impact Assessment Regulations (Official Gazette No. 939, dated 10 March 2008). The guidelines are provided to assist those undertaking development projects that may have a potential impact on the environment, and will guide proponents on the various aspects

of dealing with the National Environmental Protection Agency as the competent environmental authority in Afghanistan. It will also provide guidance on how the public should be consulted and the roles and responsibilities of the various stakeholders in the process.

- Environmental Impact Assessment Policy - "An Integrated Approach to Environmental Impact Assessment in Afghanistan", November 2007. NEPA with the assistance from UNEP has developed the EIA Policy of Afghanistan. The policy stipulates energy sector guidelines to the project proponents to integrate EIA in the process of development and the procedures to address environmental consequences and involve necessary institutions in the process of project implementation.
- National Environment Strategic Documents. These include (i) The Millennium Development Goals: Vision 2020; (ii) The Afghanistan Compact; (iii) The Afghanistan National Development Strategy (ANDS 2008-2013), and (iv) The National Environment Strategy.

B. ADB's Safeguard Policy Statement (SPS) and other relevant policies

6. The goal of the ADB's Safeguard Policy Statement (SPS) is to promote the sustainability of project outcomes by protecting the environment and people from projects' potential adverse impacts. Among the objectives of ADB's safeguards are:

(i) avoidance of adverse impacts of projects on the environment and affected people, where possible;

(ii) minimizing, mitigating, and/or compensating for adverse project impacts on the environment and affected people when avoidance is not possible.

7. ADB's SPS sets out the policy objectives, scope and triggers, and principles for three key safeguard areas:

(i) environmental safeguards,
(ii) involuntary resettlement safeguards, and
(iii) Indigenous Peoples safeguards.

8. ADB's Safeguard Policy Principles are summarized in a table below:

	Policy Principle	Summary
1	Screening and categorization	Initiate screening process early to determine the appropriate extent and type of environmental assessment.
2	Environmental assessment	Conduct an environmental assessment to identify potential impacts and risks in the context of the project's area of influence.
3	Alternatives	Examine alternatives to the project's location, design, technology, and components and their potential environmental and social impacts, including no project alternative.
4	Impact mitigation	Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts. Prepare an environmental management plan (EMP).
5	Public consultations	Carry out meaningful consultation with affected people and facilitate their informed participation. Involve stakeholders early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout project implementation. Establish a grievance redress mechanism.
6	Disclosure of environmental assessment	Disclose a draft environmental assessment in a timely manner, in an accessible place and in a form and language(s) understandable to stakeholders. Disclose the final environmental assessment to stakeholders.

	Policy Principle	Summary
7	Environmental management plan	Implement the EMP and monitor its effectiveness. Document monitoring results, and disclose monitoring reports.
8	Biodiversity	Do not implement project activities in areas of critical habitats.
9	Pollution prevention	Apply pollution prevention and control technologies and practices consistent with international good practices. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges. Avoid the use of hazardous materials subject to international bans or phaseouts.
10	Occupational health and safety. Community safety.	Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease. Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities
11	Physical cultural resources	Conserve physical cultural resources and avoid destroying or damaging them. Provide for the use of “chance find” procedures.

9. ADB’s Public Communication Policy (2011) aims to enhance stakeholders’ trust in and ability to engage with ADB, and thereby increase the development impact of ADB operations. The policy promotes transparency, accountability, and participatory development. It establishes the disclosure requirements for documents ADB produces or requires to be produced.

10. ADB’s Accountability Mechanism Policy’s (2012) objectives is to provide an independent and effective forum for people adversely affected by ADB-assisted projects to voice their concerns and seek solutions to their problems, and to request compliance review of the alleged noncompliance by ADB with its operational policies and procedures that may have caused, or is likely to cause, them direct and material harm. The Accountability Mechanism a “last resort” mechanism.

III. DESCRIPTION OF THE PROGRAM

11. The Investment Programs subproject's planned under each tranche and their cost estimates are summarized in Table 1.

Table 1: Tranches of the Investment Program

Tranche	Project's description	Estimated Cost ($ million)
T1	500-kV transmission line (306 kilometers) between Sheberghan and Dashte Alwan	
	220-kV transmission line (66 kilometers) between Sheberghan and Andkhoy	275
T2	300-MW High Voltage Direct Current Back to Back Convertor Station at Dashte Alwan	
	220-kV transmission line (150 kilometers) between Charikar and Bamyan including 16 MVA 220/20-kV substation and power distribution network for 10,000 connections	415
T3	20-MW Surobi Solar Power project (Surobi District, Kabul Province)	60
T4	190 kilometer 220-kilovolt (kV) transmission line between capital city Kabul and Nangrahar provincial capital Jalalabad	60
T5	(i) 220-kilovolt (kV) transmission line (100 kms) Jalalabad - Asadabad including a 220/2-/kV substation (2 x 40 megavolt ampheres) in Asadabad; (ii) a 220 kV transmission line (70 kms) Ghazni - Sharana including a 220/2-/kV substation (2 x 16 megavolt ampheres) in Sharana	
	Total MFF	

IV. ANTICIPATED ENVIRONMENTAL IMPACTS

12. It is anticipated that the Investment Program will have environmental impacts characteristic of construction of transmission lines and substations, solar plants, and natural gas extraction. The magnitude of those impacts will vary depending on sensitivity of the environment including ecological environment or availability of archeological or historical sites in project area. The potential environmental impacts can include:

- *Physical Environment.* Potential impacts to area topography are likely to occur in the construction stage due to the possibilities of cut and fill. Earth-moving operations can cause soil erosion. Potential air quality impacts of the subprojects during the construction phase can be anticipated due to fugitive dust generation in and around construction activities and related activities such as plants for crushing rocks, hot-mix and asphalt plants. Water extraction for construction purposes and camps can affect the availability of water for domestic or agricultural use. Fuel and lubricants construction machinery can contaminate groundwater and surface water if they are not properly stored and disposed. Potential impacts are also related to wastewater from construction camps. Noise and vibration impacts, generated by construction activities can affect noise-sensitive receptors such as hospitals, schools in settlements and wildlife in specially protected areas. The projects can be subject to natural disasters such as earthquakes, landslides, rockfalls, and flooding;
- *Biological Resources.* Potential impacts related to biological resources include a risk of habitat fragmentation and loss, improved accessibility and increase in poaching, physical disturbance of wildlife, removal of vegetation in the OHL RoW. The OHL under subprojects can run in vicinity of existing or proposed protected areas;
- *Socioeconomic Environment.* Potential impacts to the social environment can include both adverse impacts such as resettlement, transmission of diseases, and positive impacts on income and unemployment trends. The subprojects can impact existing infrastructure. Potential impacts on archaeological, historical and cultural assets located within RoW can occur due to construction activities, and there is also a possibility of a chance-find

V. ENVIRONMENTAL ASSESSMENT FOR SUBPROJECTS AND/OR COMPONENTS

13. The following general criteria will be adopted for selection of the subprojects for the Investment Program:

(i) The subprojects shall only be selected from DABS priority list.
(ii) The subprojects shall only involve activities that follow all the government regulations.
(iii) Subprojects including activities listed in ADB's Prohibited Investment Activities List (ADB SPS's Appendix 5) do not qualify for ADB's financing.
(iv) The subprojects that can have considerable adverse impacts on the environment (Category A) or located in environmentally sensitive areas are subject to mandatory environmental assessment as detailed below.

14. A final check on conformity with the selection criteria will be the submission of selected subprojects for ADB's clearance. Any subproject, which does not meet the general criteria listed above may be rejected.

15. All subprojects will be subject to environmental assessment process (Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA)). Depending on the significance of project impacts and risks, the assessment may comprise a full-scale environmental impact assessment (EIA) for category A projects, an initial environmental examination (IEE) or equivalent process for category B projects, or a desk review.

A. Requirements to Environmental Screening and Classification

16. All subprojects to be included in investment program will be screened to determine their environmental category. Categorization is to be undertaken using Rapid Environmental Assessment (REA) checklists (template of the REA is given in Appendix 1), consisting of screening questions relating to (i) the sensitivity and vulnerability of environmental resources in project area, and (ii) the potential for the project to cause significant adverse environmental impacts. Projects are classified into one of the following environmental categories:

a. **Category A**: A proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse or unprecedented. These impacts may affect an area lager than the sites or facilities subject to physical works. An environmental impact assessment (EIA) is required.
b. **Category B**: A proposed project is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination (IEE) is required.
c. **Category C**: A proposed project is classified as category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed.

17. Categorization is to be based on the most environmental sensitive component, which means that if one part of the project is with potential for significant adverse environmental impacts, then the project is to be classified as Category A regardless of potential environmental impacts of other aspects of the project. In general, a project will be classified as 'Category A' if the project:

(i) is a new hydropower plant, thermal plant, or large wind park;
(ii) requires a complex mitigation measure needing to be prepared through an in-depth assessment of the impacts and detailed study for preparing mitigation measures;

(iii) will generate impact on an ecologically sensitive area, particularly if the project is in buffer or core zone of any designated specially protected areas, or area of international significance (such as Ramsar site) or cultural heritage and archaeological sites designated by UNESCO and Ministry of Information and Culture.

18. Other energy generation or energy transmission subprojects that do not fall into the above category will likely be classified as B.

B. Requirements to Environmental Assessments and Environmental Management Plans

19. At an early stage of each subproject preparation, the DABS will identify potential direct, indirect, cumulative and induced environmental impacts on and risks to physical, biological, socioeconomic, and physical cultural resources and determine their significance and scope, in consultation with stakeholders, including affected people, women, and concerned NGOs. If potentially adverse environmental impacts and risks are identified, the DABS will undertake an environmental assessment as early as possible in the project cycle. For subprojects with potentially significant adverse impacts that are diverse, irreversible, or unprecedented, the DABS will examine alternatives to the project's location, design, technology, and components that would avoid, and, if avoidance is not possible, minimize adverse environmental impacts and risks. The rationale for selecting the subproject location, design, technology, and components will be properly documented, including, cost-benefit analysis, taking environmental costs and benefits of the various alternatives considered into account. The "no action" alternative will be also considered.

20. Impacts and risks will be analyzed in the context of each subproject's area that encompasses:

(i) the primary subproject site(s) and related facilities;
(ii) associated facilities that are not funded as part of the investment program, and whose viability and existence depend exclusively on the subproject and whose goods or services are essential for successful operation of the subproject;
(iii) areas and communities potentially affected by cumulative impacts of the investment program, and other sources of similar impacts in the geographical area; and
(iv) areas and communities potentially affected by impacts from unplanned but predictable developments caused by the subproject that may occur later or at a different location.

21. Environmental impacts and risks will also be analyzed for all relevant stages of the project cycle, including preconstruction, construction, operations, decommissioning, and post closure activities such as rehabilitation or restoration.

22. The DABS will prepare an environmental management plan (EMP) that addresses the potential impacts and risks identified by the environmental assessment. The EMP will include the proposed mitigation measures, environmental monitoring and reporting requirements, emergency response procedures, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. The structure and composition of the typical EMP is provided in Appendix 2.

23. The DABS should ensure that ADB be given access to undertake environmental due diligence for all subprojects. However, DABS has the main responsibility for undertaking environmental due diligence and monitoring the implementation of environmental mitigation measures for all subprojects. The due diligence report as well as monitoring reports on implementation of the environmental management plan needs to be documented systematically and be available to the public, if requested.

VI. CONSULTATION, INFORMATION DISCLOSURE, AND GRIEVANCE REDRESS MECHANISM

A. Public Consultation

24. For each of the subprojects the DABS will organize consultations with project affected people and other stakeholders. Consultation will be based on the following principles:

(i) Early start in the subproject preparation stage and continuation throughout the subproject cycle;
(ii) Timely disclosure of relevant information in a comprehensible and readily accessible to affected people format;
(iii) Ensuring the absence of intimidation or coercion during public consultation;
(iv) Gender inclusive and responsive with focus on disadvantaged and vulnerable groups, and
(v) Enabling the integration of all relevant views of affected people and stakeholders into decision-making.

B. Information Disclosure

25. DABS and ADB agree that in disclosing environmental information for each of the subproject to the public:

(i) DABS is responsible for ensuring that all environmental assessment documentation, including the environmental due diligence and monitoring reports, are properly and systematically kept as part of a DABS project-specific record;
(ii) all environmental documents are subject to public disclosure, and therefore be made available to public;
(iii) for ADB's category-A subprojects, the draft EIAs will be disclosed to the public through ADB's websites 120 days prior ADB board consideration. The EIA/IEE should be reviewed by ADB before it is disclosed to the public; and
(iv) DABS will ensure that meaningful public consultations, particularly with project affected persons, are undertaken during the IEE/EIA preparation process for the future subprojects.

C. Grievance Redress Mechanism

26. A mechanism to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the project's environmental performance will be established for each of subprojects. The grievance mechanism should be scaled to the risks and adverse impacts of the project. It should address affected people's concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to all segments of the affected people at no costs and without retribution. The mechanism should not impede access to the Afghanistan's judicial or administrative remedies. DABS will appropriately inform the affected people about the mechanism.

VII. INSTITUTIONAL ARRANGEMENT AND RESPONSIBILITIES

27. To prepare the follow-up subprojects and to comply with ADB's Safeguard Policy Statement (2009) and the Afghanistan environmental legislation, DABS and ADB agreed on the following:

(i) DABS will take the following responsibilities:

a. Prepare environmental screening checklists and classify potential subprojects;
b. Based on the environmental classification of the subprojects, prepare the terms of reference to conduct an IEE or an EIA study (outline of an environmental assessment report is shown in Appendix 2);
c. Hire an environmental consultant or firm to prepare an IEE or EIA report, including an EMP for disclosure;
d. Undertake an initial review of the IEE or EIA;
e. Submit the IEE or EIA report and the review form to ADB as part of the approval of subproject;
f. Ensure that all regulatory clearances are obtained before starting civil works for the subproject.
g. Submit to ADB all the required clearances/certificates obtained from the relevant Government authorities.
h. Ensure that all the mitigation measures required to be implemented during construction are included in the bidding document;
i. Establish/Maintain an Environment and Social Unit within PMU to monitor the contractors and the implementation of the environmental management measures required for each sub-project;
j. Require the contractor to prepare site-specific EMPs for operations that includes a sub-plan for each of the work areas.
k. Ensure that no land will be released to the contractor until the SS EMP for that area has been prepared and approved.
l. Require that the contractor employ a suitably qualified or experienced environment specialist on a full-time basis to supervise the implementation of the EMP.
m. Require that the contractor provide awareness training in environmental management for all employees working on the project.
n. Ensure that an environmental management plan, including all proposed mitigation measures and monitoring programs, are properly implemented.
o. Monitor the implementation of environmental management plan and prepare an environmental monitoring report every six months, to be delivered to the ADB.
p. In the case of unpredicted environmental impacts occurring during project implementation, require the contractor to provide and implement a corrective action plan.
q. In case a subproject needs to have its alignment changed or its environmental classification reconfirmed, review it to determine whether a supplementary IEE or EIA study is required. If it is required, prepare the terms of reference for undertaking a supplementary IEE or EIA and hire an environment consultant to carry out the study.
r. Ensure that meaningful public consultation be undertaken with affected groups, women, and NGOs.

(ii) ADB will take the following responsibilities:

a. Review the IEE or EIA reports as a basis for the approval of each sub-project.

b. Disclose the final IEE or draft full EIA (at least 120 days prior to ADB Board consideration) and Final EIA, and/or environmental assessment and review framework before project appraisal, a new or updated EIA/IEE and corrective action plan prepared during project implementation, if any, as well as environmental monitoring reports on the ADB website
c. Monitor the implementation of the EMP and due diligence as part of overall project review mission.
d. Assist DABS, if required, in carrying out its responsibilities and safeguard capacity building.
e. Facilitate the required consultations with project affected groups and local NGOs, and to ensure that the borrower or project sponsor provides relevant information on the project's environmental issues in a form and language(s) accessible to those being consulted.

A. Staffing Requirements and Budget

28. DABS will recruit environmental consultant(s) or firm as part of engineering design team to prepare Initial Environmental Examination / Environmental Impact Assessment reports for each subproject associated with this Investment Program.

29. The subprojects' environmental costs need to incorporate a budget and resources to (i) implement the environmental review and screening procedure, (ii) undertake the IEE/EIA studies for the follow-up subprojects, (iii) conduct stakeholder's consultations, (iv) monitor the implementation of EMPs, and (v) undertake environmental mitigation measures as required. The estimated budget in shown in the Appendix 3.

30. The costs of conducting training, undertaking monitoring, procuring laboratory equipment for instrumental monitoring, hiring environmental consultants, and implementing the environmental impact assessment and review framework needs also to be incorporated in the subprojects' budgets.

VIII. MONITORING AND REPORTING

31. The extent of monitoring activities, including their scope and periodicity, will be commensurate with the project's risks and impacts. DABS is required to implement safeguard measures and relevant safeguard plans, as provided in the legal agreements, and to submit periodic monitoring reports (see the template in Appendix 4) on their implementation performance. ADB will require DABS to:

(i) establish and maintain procedures to monitor the progress of implementation of EMPs;
(ii) verify the compliance with environmental measures and their progress toward intended outcomes;
(iii) document and disclose monitoring results and identify necessary corrective and preventive actions in the periodic monitoring reports;
(iv) follow up on these actions to ensure progress toward the desired outcomes,
(v) retain qualified and experienced external experts or qualified NGOs to verify monitoring information for projects with significant impacts and risks;
(vi) use independent advisory panels to monitor project implementation for highly complex and sensitive projects, and
(vii) submit periodic monitoring reports on safeguard measures as agreed with ADB.

32. ADB will carry out the following monitoring actions to supervise subprojects implementation:

(i) conduct periodic site visits for projects with adverse environmental or social impacts;
(ii) conduct supervision missions with detailed review by ADB's safeguard specialists/officers or consultants for sub-projects with significant adverse social or environmental impacts;
(iii) review the periodic monitoring reports submitted by DABS to ensure that adverse impacts and risks are mitigated as planned and as agreed with ADB;
(iv) work with DABS to rectify to the extent possible any failures to comply with their safeguard commitments, as covenanted in the legal agreements, and exercise remedies to reestablish compliance as appropriate; and
(v) prepare project completion reports that assesses whether the objective and desired outcomes of the EMPs have been achieved, considering the baseline conditions and the results of monitoring.

APPENDIX 1. REA CHECKLISTS

RAPID ENVIRONMENTAL ASSESSMENT (REA) CHECKLIST FOR POWER TRANSMISSION

Instructions:

(i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to Environment and Safeguards Division (SDES) for endorsement by Director, SDES and for approval by the Chief Compliance Officer.

(ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title:

Sector Division:

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
B. Potential Environmental Impacts Will the Project cause…			
▪ encroachment on historical/cultural areas, disfiguration of landscape and increased waste generation?			
▪ encroachment on precious ecosystem (e.g. sensitive or protected areas)?			
▪ alteration of surface water hydrology of waterways crossed by roads and resulting in increased sediment in streams affected by increased soil erosion at the construction site?			

Screening Questions	Yes	No	Remarks
▪ damage to sensitive coastal/marine habitats by construction of submarine cables?			
▪ deterioration of surface water quality due to silt runoff, sanitary wastes from worker-based camps and chemicals used in construction?			
▪ increased local air pollution due to rock crushing, cutting and filling?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ chemical pollution resulting from chemical clearing of vegetation for construction site?			
▪ noise and vibration due to blasting and other civil works?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ social conflicts relating to inconveniences in living conditions where construction interferes with pre-existing roads?			
▪ hazardous driving conditions where construction interferes with pre-existing roads?			
▪ creation of temporary breeding habitats for vectors of disease such as mosquitoes and rodents?			
▪ dislocation and compulsory resettlement of people living in right-of-way of the power transmission lines?			
▪ environmental disturbances associated with the maintenance of lines (e.g. routine control of vegetative height under the lines)?			
▪ facilitation of access to protected areas in case corridors traverse protected areas?			
▪ disturbances (e.g. noise and chemical pollutants) if herbicides are used to control vegetative height?			
▪ large population influx during project construction and operation that cause increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			

Screening Questions	Yes	No	Remarks
▪ poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from workers to local populations?			
▪ risks to community safety associated with maintenance of lines and related facilities?			
▪ community health hazards due to electromagnetic fields, land subsidence, lowered groundwater table, and salinization?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g., high voltage wires, and transmission towers and lines) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

A Checklist for Preliminary Climate Risk Screening

Country/Project Title:

Sector:

Subsector:

Division/Department:

Screening Questions		Score	Remarks[1]
Location and Design of project	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather-related events such as floods, droughts, storms, landslides?		
	Would the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc)?		
Materials and Maintenance	Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydrometeorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?		
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s)?		
Performance of project outputs	Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydropower generation facilities) throughout their design life time?		

[1] If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

Responses when added that provide a score of 0 will be considered low risk project. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any single response, the project will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response, will be categorized as high risk project.

Result of Initial Screening (Low, Medium, High):_____

Other Comments:_____
_____
_____

Prepared by: _____

Rapid Environmental Assessment (REA) Checklist for Wind Energy

Instructions:

(i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (SDES) for endorsement by the Director, SDES and for approval by the Chief Compliance Officer.

(ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title:

Sector Division:

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Offshore (marine)			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
B. Potential Environmental Impacts Will the Project cause…			
▪ encroachment on precious ecology resulting in loss or damage to terrestrial or aquatic habitats (e.g., wetlands or sensitive or protected areas) or species of conservation significance?			
▪ encroachment on historical/cultural monuments or areas?			

Screening Questions	Yes	No	Remarks
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical and biological hazards during project construction and operation?			
▪ noise and vibration due to blasting and other civil works?			
▪ an increase in local traffic during construction?			
▪ decrease in value of land in the area due to noise, the degradation of environmental aesthetics or other nuisances?			
▪ short-term ecological disturbances such as soil erosion, water quality deterioration (surface and groundwater), air pollution, noise and vibrations from construction equipment?			
▪ alteration of surface water flows by towers, roads or other facilities, resulting in erosion and stream sedimentation?			
▪ disturbance of sensitive marine ecosystems from the installation of offshore towers and submarine cables?			
▪ a threat to bird or bat life from turbine and tower collision (particularly waterbirds)?			
▪ noise disturbance during operation due to the proximity of settlements or other features?			
▪ disruption of radar or telecommunications from electromagnetic interference?			
▪ aviation or navigation hazard from turbines?			
▪ hazards to traffic on major roads near the wind farm due to the location of turbines causing driver distraction?			
▪ facilitation of access to protected areas by roads or the transmission line corridor?			
▪ shadow flicker in nearby settlements or at other important local sites?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			

Screening Questions	Yes	No	Remarks
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

A Checklist for Preliminary Climate Risk Screening

Country/Project Title:

Sector :

Subsector:

Division/Department:

Screening Questions		Score	Remarks[2]
Location and Design of project	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather related events such as floods, droughts, storms, landslides?		
	Would the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc)?		
Materials and Maintenance	Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?		
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s) ?		
Performance of project outputs	Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time?		

[2] If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

Responses when added that provide a score of 0 will be considered low risk project. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any single response, the project will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response, will be categorized as high risk project.

Result of Initial Screening (Low, Medium, High):_____

Other Comments:_____
_____
_____

Prepared by: _____

APPENDIX 2. OUTLINE OF AN ENVIRONMENTAL ASSESSMENT REPORT

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

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

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

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

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

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

F. Analysis of Alternatives
This section examines alternatives to the proposed project site, technology, design, and operation - including the no project alternative - in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. It also states the basis for selecting the particular project design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement.

G. Information Disclosure, Consultation, and Participation

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

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

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

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

(ii) Monitoring:
(a) describes monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and
(b) describes monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.
(iii) Implementation arrangements:
(a) specifies the implementation schedule showing phasing and coordination with overall project implementation;
(b) describes institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and
(c) estimates capital and recurrent costs and describes sources of funds for implementing the environmental management plan.

(iv) Performance indicators: describes the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

J. Conclusion and Recommendation

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

APPENDIX 3. OUTLINE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR ENVIRONMENTAL ASSESSMENT

A. Objectives

The objective of the consulting services is to ensure the environmental soundness and sustainability of the project and to support the integration of environmental considerations into the project-making process. This will be achieved by conducting environmental impact assessment (EIA) or initial environmental examination (IEE) of the proposed subproject to identify potential environmental impacts on physical, ecological, socioeconomic, and physical cultural resources, and preparing EIA/IEE report with environmental management plan in accordance with the ADB's Safeguard Policy Statement (2009). The indicative duration of an EIA study is 4-6 months and an IEE study – 1.5 – 3 months.

B. Scope of Work

The consultant's scope of work will include the following tasks:

- Analysis of the background materials. Background materials of the earlier studies including ecological, geotechnical, hydrogeologic, and other relevant studies for each sub-project will be collected from the relevant organizations and analyzed;
- Assessment of Environmental Impacts and Development of Mitigation Measures. An EIA or IEE study to assess potential direct, indirect, cumulative, induced, as well as transboundary and global impacts of the project to physical, biological, socioeconomic, and physical cultural resources during design, construction and operation stages will be conducted. Adverse environmental impacts will be avoided, or where it is not possible
- Examination of Alternatives. Alternatives to the project's location, design, technology, as well as "no project" alternative will be assessed;
- Public consultations. Meaningful public consultations with affected people (at least two rounds consultations for EIA and one consultation for IEE) ensuring participation of all stakeholders including non-governmental organizations, women will be conducted. The list of people attended the consultation, time and locations, subjects discussed during consultation will be recorded in systematic manner and attached in the EIA/IEE report as an appendix;
- Grievance Redress Mechanism will be established;
- Preparation of IEE/EIA report. An EIA/IEE report including executive summary, policy, legal, and environmental framework, description of the project, baseline data, expected environmental impacts and mitigation measures, analysis of alternatives, information disclosure, consultation and participation, grievance redress mechanism, in accordance with ADB's Safeguard Policy Statement (2009);
- Preparation of EMP. Site-specific environmental management plan will be prepared within the framework of this activity.

C. Team Composition and Organization

Composition of an environmental assessment team will depend on the level of environmental assessment required (IEE or EIA), as well as location, type and magnitude of the project. In general, it will be based on the following requirements:

- both international and domestic specialists will be involved in environmental assessment process;
- in case of an IEE, the team will by composed of, in most cases, environmental specialists;
- in case of an EIA, sub-specialists such as biologists, hydrologists, botanists, etc will be brought into the process depending on the subproject sensitive field;
- the Team Leader (International Environmental Specialist) will have 10-15 years of experience in environmental assessment, environmental management and monitoring, construction supervision of projects including transmission line/substation construction, team management skills, experience working in teams of multi-discipline experts and leading a national team of consultants, understanding of administrative, procedural, and technical requirements of environmental assessment;
- Domestic Specialists will be graduates in environmental science, environmental engineering, geological science, engineering hydrology, biology or related discipline with significant experience in environmental management and monitoring of projects, environmental assessment and/or design and implementation of environmental mitigation measures.

D. Budget

The estimated costs for preparation of IEE and EIA are provided in Tables below. A team of International and national specialists are recommended for these studies.

Estimate of the Preparation of the IEE report for a subproject

	Months	per month	Amount
Remuneration, accomodation, per diem			
Environmental Specialist, International	2	25000	$50,000
Environmental Specialist, Domestic	2	4000	$8,000
		Sub-total	$58,000
Out of pocket expenses			
Land transport			$5,000
Report preparation, transmission			$2,000
Public consultations			$2,000
Administrative and support cost			$3,000
		Sub-total	$12,000
Contingency (10%)			$7,000
		Total:	77,000

Estimate of the Preparation of the EIA report for a subproject

	Months	per month	Amount
Remuneration, accomodation, per diem			
Environmental Specialist, International	4	25000	$100,000
Environmental Specialist, Domestic	4	4000	$16,000
Ecologist, Domestic	3	4000	$12,000
Other specialists (biologists, geologists, archeologists, etc)	6	3000	18000
		Sub-total	$146,000
Out of pocket expenses			
Field studies and analysis			$10,000
Land transport			$7,000
Report preparation, transmission			$2,000
Public consultations			$4,000
Administrative and support cost			$5,000
		Sub-total	$28,000
Contingency (10%)			$17,400
		Total:	191,400

APPENDIX 4. OUTLINE OF ENVIRONMENTAL MONITORING REPORT

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

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

Prepared by {author(s)}

{Firm name}

{City, country}

For {Executing agency}
{Implementing agency}

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

Table of Contents

Annexes:
Photographs (with date printed)
Monitoring data
Etc..

Abbreviations
Include list of abbreviations used in the report

1 INTRODUCTION

1.1 Preamble

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for INSERT PROJECT NAME.

2. This report is the (insert number of report, i.e. 1st, 2nd etc) EMR for the project.

1.2 Headline Information

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

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

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

2.2 Project Contracts and Management

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

6. Provide a description of how the contracts are being managed and names of key personnel.

2.3 Project Activities During Current Reporting Period

7. Provide an outline of major activities which have been carried out during the current reporting period. Provide adequate information so the reader can understand what has been taking place on site. Include photographs (with date stamp) of activities where possible and relevant. Place bulk photographs into an annex to the main report or a separate photographic record.

8. Where multiple work sites are involved provide information on which work sites have been active during the current reporting period. Provide map of work site areas if relevant.

9. Provide details (chart) of worker numbers (maximum, Minimum) in the current reporting period and anticipated changes in staff in following period

10. Highlight any significant new activities commenced during the current reporting period.

11. For the above make maximum use of charts, images and tables.

2.4 Description of Any Changes to Project Design

12. Describe any changes to the project design from that which was assessed in the Impact Assessment phase of the project and is set out in the Initial Environmental Examination/Environmental Impact Assessment. If none have taken place, please state – No changes.

13. Note if significant changes have occurred the PIU should have already informed ADB of this and made a decision on the need for updates to the EIA/IEE and/or Environmental Management Plans

2.5 Description of Any Changes to Agreed Construction methods

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

3 ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

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

3.2 Site Audits

16. Please provide details (table form preferred) of any **formal** audits undertaken by environmental safeguard process staff during the current reporting period. This would include Contractors Environmental Manager, Environmental Supervisor, PIU Staff and ADB staff during review missions.

17. Information required includes:

- Date of Visit
- Auditors Name
- Purpose of Audit
- Summary of any Significant Findings
- Cross reference to Audit Report which should be included as an annex.

18. Summarise Findings of Audits under taken in the current period, compare with previous periods and identify any trends or common issues.

3.3 Issues Tracking (Based on Non-Conformance Notices)

19. Provide an overview and description of issues tracked during the current period.

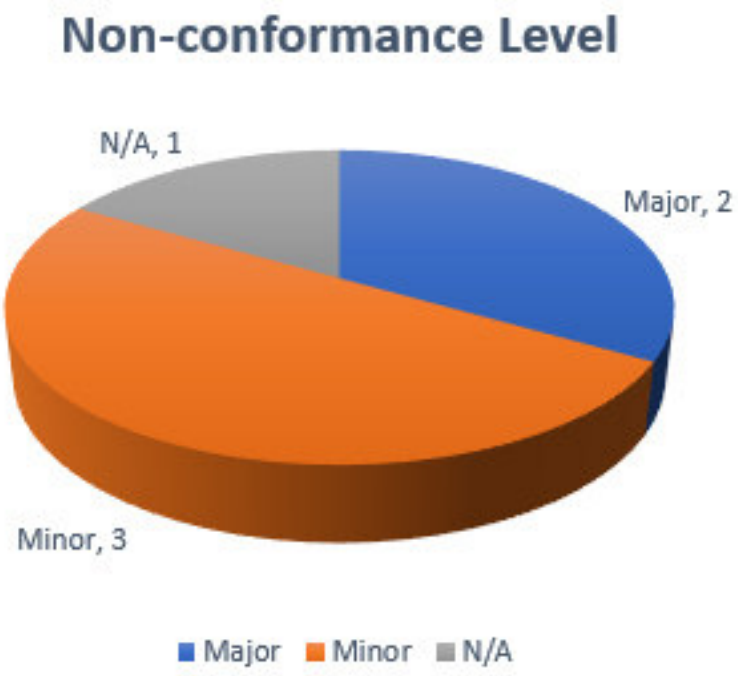
20. Provide commentary on key statistics based on graphs and tables which can be copied from the Environmental Safeguards Issues Tracing Workbook. For example

Table 3-1 Summary of Issues Tracking Activity for Current Period

Summary Table

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

Figure 3-1 - Summary of Issues by Non-Conformance



21. Use data from workbook as required.

3.4 Trends

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

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

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

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

3.5 Unanticipated Environmental Impacts or Risks

25. Document any unanticipated environmental impacts and risks which have been identified in the current period (as a reminder, these are impacts or risks which were not identified

in the Impact Assessment process). State what actions were taken to mitigate the impacts and risks, were these successful.

4 RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

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

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

- Noise
- Air Quality
- Water Quality

28. The sections should present highlights of the outcomes of the monitoring focussing on a comparison of the results with the agreed standards as set out in the Specific Environmental Management Plan and/or Monitoring Plan.

29. In particular make clear where exceedances in the standards have occurred and provide reasons and actions which have been implemented to correct – refer to relevant NCN as appropriate.

30. Detailed monitoring results should be presented as an annex.

4.2 Trends

31. Based on the current and past periods of monitoring identify and discuss any trends which may be developing.

4.3 Summary of Monitoring Outcomes

32. Provide any recommendations on the need for additional monitoring, or requests for ceasing/altering monitoring if activities have been completed or monitoring is showing no significant effects over long period.

4.4 Material Resources Utilisation

4.4.1 Current Period

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

4.4.2 Cumulative Resource Utilisation

34. Provide values (tables, graphs etc) for cumulative resource utilisation of power water etc, for whole project life. Identify trends or significant changes and provide reasons for any such changes.

4.5 Waste Management

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

4.5.1 Current Period

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

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

37. Provide commentary on results.

4.5.2 Cumulative Waste Generation

38. Using the above bullet points for waste develop cumulative waste generation results.

39. Discuss trends and provide suggestions for waste reduction, increase in reuse and recycling if possible.

4.6 Health and Safety

4.6.1 Community Health and Safety

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

4.6.2 Worker Safety and Health

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

42. Provide information on safety campaigns conducted during the reporting period.

4.7 Training

43. Provide information on all environmental safeguard related training activities undertaken in this period and cumulatively for project life to date. These may include specific training of environmental staff, HSE inductions of site workers etc.

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

5 FUNCTIONING OF THE SEMP

5.1 SEMP Review

45. Provide a commentary on the SEMP in terms of the ability of the contractor to implement fully the requirements set out. Highlight any areas where the contractor has not been able to implement mitigation or monitoring measures.

46. Is the SEMP effective, are mitigation measures set out still appropriate and are they working as intended – do they need changing?

47. Are there better alternative mitigation measures?

48. Can some mitigation measures be reduced or removed as the specific risk identified in the IEE/EIA and/or SEMP has not materialised?

49. Provide a table of requests for changes to the current mitigation measures for consideration by ADB. Note you can send these at any time during the project, there is no need to wait until the quarterly reporting period to be completed. If PIU has supplied requests to ADB, these should be listed along with ADB response. Where changes (additions/deletions and modifications) of mitigation or monitoring measures have been approved, the PIU shall ensure that the SEMP is updated to reflect these changes.

6 GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

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

6.2 Opportunities for Improvement

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

7 SUMMARY AND RECOMMENDATIONS

7.1 Summary

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

7.2 Recommendations

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