Environmental and Social Impact Assessment

PUBLIC

Project Number: 58290-001
Draft
August 2024

Uzbekistan: Samarkand I Solar PV and BESS Project

PART 6

Prepared by ACWA Power for the Asian Development Bank (ADB).

Samarkand I Solar PV and BESS Project

Republic of Uzbekistan

Environmental and Social Impact Assessment (ESIA)

Volume III: Framework for Environmental and Social Management

August 2024, v1.1

Document Information

Project Name	Samarkand I Solar PV and BESS Project
5Cs Project Number	1305/001/153
Document Title	ESIA Volume III: Framework for Environmental and Social Management
Client	ACWA Power
5Cs Project Manager	Catherine Sarunday
5Cs Project Director	Ken Wade

Document Control

Version	Date	Description	Author	Reviewer	Approver
1.0	31/01/2024	Framework ESMP (Volume 3 of Samarkand I Solar PV and BESS Project ESIA Report	CS	MB	KRW
1.1	08/08/2024	Framework ESMP for Disclosure	CS	MB/KRW	KRW

1	Financial Capital
2	Social Capital
3	Natural Capital
4	Manufactured Capital
5	Human Capital

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CONTENTS

LIST OF ABBREVIATIONS

ABBREVIATION	MEANING
ADB	Asian Development Bank
BESS	Battery Energy Storage System
BMEP	Biodiversity Monitoring and Evaluation Plan
BMP	Biodiversity Management Plan
CESMP	Construction Environmental & Social Management Plan
CLOs	Community Liaison Officers
DFIs	Development Finance Institutions
EIA	Environmental Impact Assessment
EPFIs	Equator Principles Financial Institution
ESIA	Environmental and Social Impact Assessment
ESMS	Environmental and Social Management System
GBV	Potential Gender-Based Violence
HSSE	Health Safety Security and Environmental
IFIs	International Financial Institutions
LALRP	Land Acquisition and Livelihood Restoration Plan
LGA	Local Government Authorities
MEEPCC	Ministry of Ecology, Environmental Protection and Climate Change
NGOs	Non-Governmental Organizations
NTS	Non-Technical Summary
O&M	Operation and Maintenance
OESMP	Operational Environmental & Social Management Plan
OTL	Overhead Transmission Line
PAC	Project-Affected Communities
PPA	Power Purchase Agreement
PPP	Public-Private Partnership
PSs	IFC Performance Standards
SCMP	Supply Chain Management Plan
SEA	Sexual Exploitation and Abuse
SEE	State Environmental Expertise
SEP	Stakeholder Engagement Plan
VECs	Valued Environmental Components

1 INTRODUCTION

1.1 Background

On 19 March 2023, the Ministry of Energy and National Electric Grid Joint Stock Company of Uzbekistan (NEGU) entered into a Power Purchase Agreement (PPA) with ACWA Power (hereinafter Project Developer), for the implementation of the Samarkand I Solar PV and BESS Project, which includes the development and operation of the following project facilities:

- 100 MW Photo-Voltaic (PV) power plant
- 400 MW PV power plant
- Nurobod (500 MWh) Battery Energy Storage System (BESS) with underground interconnection cable
- 4.9-km Overhead Transmission Line (OTL)
- 70-km OTL
- Two 11-km OTLs constituting a Loop-In-Loop-Out (LILO) interconnection
- Two 19-km OTLs constituting a Loop-In-Loop-Out (LILO) interconnection

1.2 Objectives of the Framework for E&S Management

This framework has been informed by the outcomes of the ESIA and has been developed to establish structures for the management of Environmental and Social (E&S) risks, impacts, opportunities in compliance with regulatory and lender-prescribed compliance obligations during the construction, commissioning and operational phases of the Project. The Framework is intended to outline systematic structures and management programmes that will comprise the respective construction-, commissioning- and operations-phase Environmental and Social Management Systems (ESMS).

In order to implement the mitigation and management measures established in the ESIA report (Volume II), specific management programmes will be developed to incorporate these mechanisms, as well as the requirements of the local regulator, Ministry of Ecology, Environmental Protection and Climate Change (MEEPCC) and the Project Lenders. Such documented information will be in the form of Project-specific Construction Environmental and Social Management Plan (CESMP) and Operation Environmental and Social Management Plan (OESMP) (and complimentary plans/procedures); to be developed prior to the commencement of construction, commissioning and operations respectively.

This framework has also been prepared to ensure alignment with applicable elements of the Project Developer's corporate E&S policy and ESMS Implementation Manual, which are

intended to guide consistent and structured E&S project management across the Developer's projects.

2 REQUIREMENTS FOR PROJECT E&S MANAGEMENT

The following applicable requirements relate to the need for the Project to implement formal or structured Environmental & Social Management Systems (ESMS), or related policies, management programmes and or other E&S management processes.

These requirements are applicable during all stages of project implementation, following planning and initial permitting (i.e. construction, commissioning, operations, decommissioning and closure).

2.1 National Level

The regulatory body in Uzbekistan responsible for the regulation of the activities within the country that relate to ecology, environmental protection and use of natural resources is the Ministry of Ecology, Environmental Protection and Climate Change (MEECC).

The main Environmental Protection Law in Uzbekistan is the Law on Nature Protection, 1992 as amended in 2019. This law provides legal, economic, and organisational basis for the conservation of the environment and the rational use of natural resources. Article 25 of this law states that the State Environmental Expertise (SEE) is a mandatory measure for environmental protection, preceded to decision making process. In addition, the law prohibits the implementation of any Project without approval from MEEPCC.

In its conclusion on the National EIA Stage I Preliminary Statement of Environmental Impact for the Project, MEEPCC requires the implementation of a dedicated Environmental Management Plan and the Environmental Monitoring Plan for regulatory compliance throughout the Project's implementation.

2.2 Lenders Requirements

It is understood that the Developer is seeking project finance from the following lenders:

- Asian Development Bank
- International Finance Corporation
- Japan Bank for International Cooperation

Performance Requirement 1 (PR1) on Assessment and Management of Environmental and Social Impacts and Issues, sets the requirements for requires Clients to establish and maintain an Environmental and Social Management System (ESMS) *'appropriate to the nature and scale of the project and commensurate with the level of its environmental and social impacts*

and issues in line with GIP. The objective of such a management system is to integrate the implementation of environmental and social requirements into a streamlined and coordinated process and to embed it in the main operational activities of the client assessment of impacts and issues. In addition, projects are required to establish an overarching policy that defines the project's environmental and social objectives. Also, and ESMP will be developed based on the outcome of the ESIA and stakeholder engagement process.

2.2.1 ADB

The ADB Safeguard Policy Statement (SPS) requires that Project Developers implement a project-level Environmental Management Plan (EMP) and monitor its effectiveness. Document monitoring results, including the development and implementation of corrective actions, and disclose monitoring reports.

2.2.2 IFC

In accordance with IFC PS1, the project will, 'establish and maintain an ESMS appropriate to the nature and scale of the project. The ESMS will incorporate the following elements: (i) policy; (ii) identification of risks and impacts; (iii)management programs; (iv)organizational capacity and competency; (v) emergency preparedness and response; (vi) stakeholder engagement; and (vii) monitoring and review.'

2.2.1 Equator Principles

Principle 4 (Environmental and Social Management System and Equator Principles Action Plan) requires the borrower to develop or maintain an Environmental and Social Management System (ESMS). Further, an Environmental and Social Management Plan (ESMP) is required to address issues raised in the assessment process.

3 ENVIRONMENTAL & SOCIAL MANAGEMENT SYSTEM (ESMS)

The Project ESMS will provide a systematic structure and approach to enable the effective implementation and management of environmental & social risks, impacts, opportunities and related compliance.

Effective management of environmental & social issues will include the following fundamental components as part of the robust ESMS:

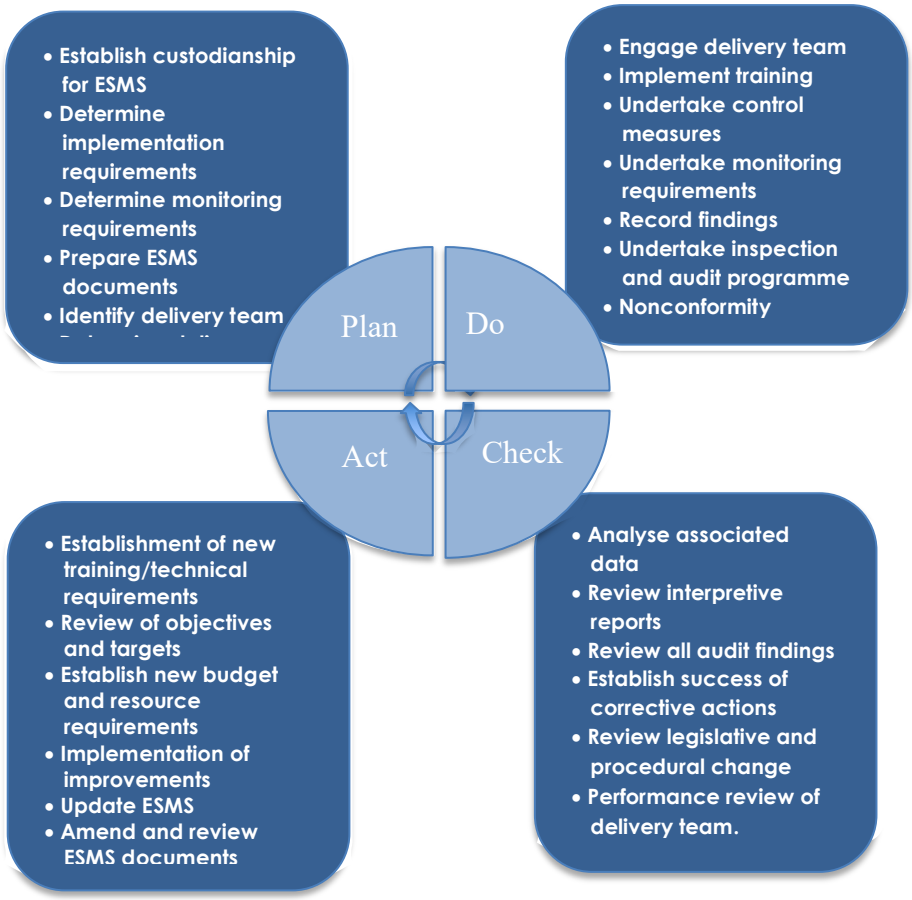
- Project specific policies related to the environmental and social considerations (including labour, HR and external stakeholders & affected communities).
- Project-based E&S Objectives, Targets & Programme.
- Applicable environmental & social legal requirements and other compliance obligations (such as those required by lenders);
- Environmental & Social aspects and potential impacts, as early as possible for construction, commissioning and operation phase planning, including the incorporation of environmental and social considerations into staffing requirements, process plans, programming, work orders, required authorisations, and site layout;
- Environmental & Social professionals, who have the experience, competence, and training necessary to assess and manage environmental impacts and risks, and carry out specialised environmental & social management functions including the preparation of Project or activity specific plans and procedures that incorporate the technical requirements presented in this document;
- Prioritisation of management programmes/ strategies with the objective of achieving an overall reduction of risk to human wellbeing and the environment, focusing on the prevention of irreversible and / or significant impacts;
- Favouring strategies (where possible) that eliminate the cause of the impact at its source, for example, by selecting less hazardous materials or processes that avoid the need for environmental controls;
- When impact avoidance is not feasible, incorporating controls to reduce or minimise the possibility and/or magnitude of undesired consequences, for example, with the application of pollution controls to reduce the levels of emitted contaminants;
- Preparing workers, informing and co-operating with nearby communities and relevant stakeholders to respond to emergencies, accidents, including providing technical and financial resources to effectively and safely control such events, and restoring workplace and community environments; and
- Improving environmental performance (i.e. for continual improvement) through a combination of ongoing monitoring of facility performance and effective accountability.

Initial implementation of the ESMS will focus on setting and reviewing requirements, determining custodianship within the project team, identifying budgets, establishing target ranges for performance and establishing appropriate data gathering techniques and controls.

Performance ranges will be refined on a regular basis as more data becomes available, in turn enabling more accurate strategy development and benchmarking. As such, the ESMS documents will be treated as living documents, to be updated within a continuous process of improvement.

An outline implementation process for ESMS is illustrated in the figure below.

Figure 3-1 Implementation Process



3.1 ESMS Scope

The Project will develop and implement ESMSs for the respective construction and operational phases. The scope will need to include:

- Physical elements of the project to set the boundaries of the ESMS scope (i.e. this will include the projects physical footprint and applicable associated facilities);

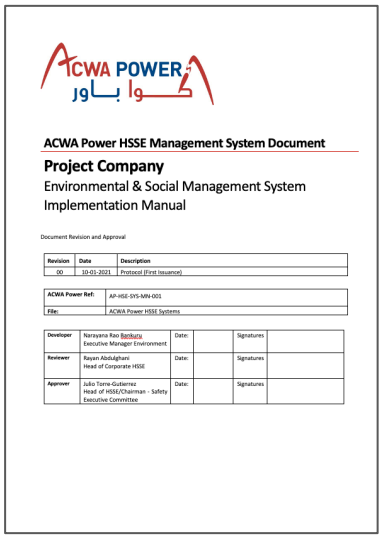
- Project related activities being undertaken (and relevant to that phase of the project e.g. for construction, commissioning, operation, decommissioning and if necessary, post closure);
- Compliance with applicable national regulation, lender requirements and loan covenants (including from the ESAP);
- Detailed mitigation and management measures required following construction, commissioning and operational impacts identified from the ESIA;
- Roles and responsibilities for appropriate management organisational units;
- Key risks and management requirements related to primary supply chains (which can reasonably be managed), and;
- Requirements for monitoring and reporting, including measures for inspection, audit, review and preventative action.

3.2 Project Company E&S Management Structures

3.2.1 Project Company E&S Policy

The Project Developer has a template E&S Policy structure for Project Companies to ensure consistent policy development across its assets. Please refer to the 'E&S Policy' chapter below for further details.

3.2.2 Project Company: ESMS Implementation Manual


ACWA POWER

ACWA Power HSSE Management System Document

Project Company

Environmental & Social Management System Implementation Manual

Document Revision and Approval

Revision	Date	Description
00	10-01-2021	Protocol (First Issuance)

ACWA Power Ref:	AP-HSE-SYS-MN-001
File:	ACWA Power HSSE Systems

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Approver	Julio Torre-Gutierrez Head of HSSE/Chairman - Safety Executive Committee	Date:		Signatures	

Besides the aforementioned E&S Policy template, the Project Company will align its E&S management with the 'Project Company - Environmental and Social Management System: Implementation Manual. This manual is a corporate document issued to all Project Companies.

The purpose of the document is to provide guidelines to ensure that key elements related to E&S management are implemented consistently by Project Companies operating within projects under ACWA Power ownership or partnership.

3.3 Development of Construction Phase ESMS

As the overall accountable party for E&S compliance and management, the Project Company will develop and implement the project specific E&S Policy. However, the main construction phase ESMS will be developed and implemented by the Engineering,

Procurement and Construction (EPC) Contractor. This will be contractually captured on in the EPC Contract.

The construction phase ESMS will align with the Project Company's E&S Policy requirements, this E&S Management Framework and the Project Developer's ESMS Implementation Manual for subsidiary project companies.

The EPC Contractor's ESMS will ensure coverage of all potential environmental and social risks, impacts, opportunities and related compliance associated that fall under the scope of the Project's construction phase (including potential impacts related to sub-contractors and key E&S risks in supply chains that can be influenced). This will include commissioning activities and post-construction activities such as site demobilisation, restoration of land used during construction etc.

3.4 Development of Operational Phase ESMS

The operational phase ESMS will be developed and implemented by the O&M Company and will align with the E&S Policy established by the Project Company. This will be contractually captured on in the O&M Contract.

The O&M Company's ESMS will ensure coverage of all potential environmental and social risks, impacts, opportunities, and related compliance associated that fall under the scope of the Project's operational phase (including potential impacts related to sub-contractors and/or other suppliers that can be influenced).

4 E&S POLICY

The Project will need to develop clear statements that define policy, commitments, and related objectives with regard to environmental and social issues/compliance and management which are project specific.

4.1 Project Company E&S Policy

The Project Developer has a template E&S Policy structure for Project Companies to ensure consistent policy development across its assets. It is designed to align with overarching corporate-level policies, whilst ensuring that legal and lender requirements are captured.

The Project Company's E&S Policy will be prepared based on this template, which includes commitments to:

- Comply with relevant E&S legal, contractual, financing requirements and obligations. Including applicable international treaties and protocols, national legislation, permitting conditions and our lenders requirements.
- Implement a risk-based Environmental and Social Management System (ESMS) that aligns with good international practices and conforms with the IFC Performance Standards (as a minimum) and other applicable lender requirements for ESMS.
- Implement measures to manage and reduce natural resource consumption, whilst implementing specified management measures to prevent pollution that are consistent with assessment documentation, permitting and lender conditions.
- Engage with employees and stakeholders on environmental & social issues and implement a robust Grievance Redress Mechanism process for project staff and third-party stakeholders.
- Uphold, respect, protect and fulfil human rights in accordance with the International Bill of Human Rights and any other instruments of international human rights such as those relating to the rights of women and children.
- Employ staff on the basis of equal opportunities and non-discrimination, whilst adhering to the ILO Conventions stated in IFC PS2 for worker management.
- Ensure staff receive environmental & social information, training and instructions on environmental & social leadership applicable to their activities and duties.
- Not accept or tolerate GBVH/SEA/SH in any form.
- Establish processes to identify, investigate and remedy instances of GBVH/SEA/SH. whilst encouraging reporting of such instances, providing support to those involved and ensuring their dignity, respect and confidentiality.
- Set indicators to promote and assure environmental & social performance of key supply chains and service providers.

- Implement systematic feedback systems to monitor, audit and report on environmental & social management and performance.
- Annually review this environmental & social policy statement and set performance and management targets to enable continual improvement within the ESMS to be achieved.

The policy will be signed by the top management of the Project Company, displayed on site and will be circulated to Project contractors for their compliance.

4.2 Contracted Parties: E&S Policies

The EPC Contractor and O&M Company may also develop E&S Policies that align with the Project Company's overarching project specific E&S policy.

Where an E&S Policy is not developed by the Project's contracted parties, the respective construction and operational phase ESMSs (developed by the contracted parties) will be spearheaded on the overarching E&S Policy of the Project Company.

5 IDENTIFICATION OF LEGAL AND COMPLIANCE OBLIGATIONS

5.1 Identification of Legal Requirements

During the development of the ESMS, the applicable environmental and social legal requirements should be identified and documented, including:

- National legislation and regulations; and
- Applicable International Treaties and Conventions signed and/or ratified by Uzbekistan.

5.2 Identification of ESIA Requirements

Volume II of the ESIA prescribes project- and/or site-specific mitigation, management and monitoring measures that must be incorporated into the respective construction, commissioning and operational phase of the project.

Upon approval of the ESIA by the regulatory authority and the project lenders, these stated measures will constitute the conditions of the approval.

5.3 Identification of Requirements from the Statutory Authority

The 'conclusions' (or other mandatory requirements) issued by MEEPCC to the Project EIA must be reviewed to ensure that all construction, commissioning and operational related conditions established are managed accordingly. Non-compliance with the conclusions prescribed by MEEPCC may result in a breach of legislation and permitting requirements. The conclusions shall be maintained as part of the ESMS.

5.4 Identification of Requirements from the Project Lenders

In response to the ESIA, EBRD will establish an Action Plan that identifies Environmental and Social requirements for the project commensurate with or supplementary to the ESIA. This will be an Environmental and Social Action Plan (ESAP) while an Equator Principles Action Plan (EPAP) will be issued by financing institutions signatory to the Equator Principles. Requirements of the action plan will be a covenant of the Project loan.

During the development of the ESMS', the project ESAP from EBRD (and EPAP from EPFIs) must be reviewed to ensure that all related conditions are included for compliance management.

It is highlighted that non-compliance with the lenders' requirements could impact financial disbursement and other factors.

6 IDENTIFICATION OF RISKS, IMPACTS & OPPORTUNITIES

One of the principal stages in the development of the Project's ESMS will be the development of a Project specific aspects/risks register linking to potential environmental or social impacts associated with the relevant activities being undertaken at that phase of the project.

Once E&S aspects and associated risks have been identified and documented (i.e. specifically in accordance with the required construction methods statements or operational activities), associated controls should be developed that are commensurate to the level of anticipated severity, likelihood and any statutory or lender requirements. The identification of risks and impacts is expected to be primarily aligned with the items identified in the ESIA but may include additional items related to specific/altered working methods.

When identifying the aspects/risks and associated E&S impacts, the following will be taken into account:

- Risks, impacts and opportunities linked to the Project activities;
- Change, including planned or new development and or new/modified activities;
- Abnormal conditions and reasonably foreseeable emergency situations;
- Project timescales and potential impacts associated with seasonality;
- Stakeholder perception;
- Compliance obligations;
- Risks inherent in the supply chain in addition to those on-site; and
- Linkages with the Project's Health and Safety Management System.

The identification of aspects/risks and impacts should be documented, linked to associated proposed controls and updated as and when Project or environmental & social circumstances change.

7 E&S MANAGEMENT PLANS & PROCEDURES

Once the Project's E&S aspects and associated risks have been identified and documented, associated controls will be developed that are commensurate to the level of anticipated severity, likelihood and any statutory or lender requirements. The identification of risks and impacts is expected to be primarily aligned with the items identified in the EIA/ESIA but may differ depending on specific working methods of the EPC Contactor / O&M Company.

7.1 E&S Management Plans (CESMP and OESMP)

The key E&S management plans will be the CESMP and OESMP respective to construction and operations.

The CEMSP and OESMP will comprise a stand-alone document structured to detail how environmental and social risks, impacts, opportunities and compliance will be managed and monitored. This shall be the top-level management plan document prepared by the EPC Contractor and O&M Company respectively.

The typical content of a CESMP/OESMP has been outlined below. The format below is not prescriptive, however, the respective CESMP/OESMP scope and structure should align with the format hereunder.

- INTRODUCTION
  - Background of Environmental Permitting
  - Objectives of the CESMP/OESMP
  - Scope of the CESMP/OEMSP
  - Limitations
  - Structure of the CESMP/OESMP
- PROJECT DESCRIPTION
  - Project Rationale and Background
  - Project Location
  - Land Use and Potential Sensitive Receptors
    - Land Ownership
    - Land Use
  - Sensitive Receptors
  - Overview of Project Components
  - Overview of Associated Facilities
  - Overview of Construction/Operational Works and Workforce Requirements
  - Overview of Construction/Operational Facilities
  - Project Schedule (for CESMP)
- REGULATORY FRAMEWORK

- Overview of Regulatory Framework and Compliance Obligations
    - Regional and International Treaties and Conventions (the host country is a signatory of)
    - Federal Legislation
    - Lenders Requirements
    - Environmental Standards

- ENVIRONMENTAL AND SOCIAL MANAGEMENT
    - Summary of Environmental and Social Management System (ESMS)
    - Reference to E&S Policies
        - Applicable EPC/O&M Corporate Level E&S Policies
        - Project Company E&S Policy Level
    - Statement of other supporting/complementary Plans and Procedures
    - Organisational Structure
        - Host country regulator
        - Lenders
        - Project Company
        - EPC Contractor/O&M Company
        - Sub-contractors
    - HSE Roles and Responsibilities
    - Environmental Awareness and Training
        - Environmental & Social Induction Training
        - Toolbox Talk Environmental & Social Training Sessions
        - CESMP/OESMP Training
    - Competency Needs and Records
    - Internal and External Communications
        - Internal Communication
        - External Communication
        - Liaison with Regulator
    - Inspections and Audits
        - Daily and Weekly Inspections
        - Internal Audits
        - Annual Internal Audits
        - External Audits
    - Non-conformity, Corrections and Corrective Action
        - Non-Conformity, Investigation and Response
        - Incident Definition, Reporting, Investigation and Response
        - Corrections and Corrective Actions
    - Control of Records

- MITIGATION, MANAGEMENT AND MONITORING
    - Terrestrial Ecology
    - Air Quality
    - Noise & Vibration

- Soil, Geology, Groundwater and Surface Water
- Traffic & Transportation
- Infrastructure & Utilities
- Archaeological and Cultural Heritage
- Landscape and Visual Amenity
- Socioeconomics and Livelihoods
- Solid Waste and Wastewater Management
- Community Health, Safety and Security
- Labour and Working Conditions
- Cross-cutting provisions for climate change.

- MONITORING SUMMARY
- EMERGENCY PREPAREDNESS AND RESPONSE OVERVIEW
- APPENDICES.

7.2 Summary ESMP Requirements

The following summary table provides an overview of impact management measures/ safeguards, implementation timeframes, responsible parties and E&S performance monitoring requirements, in the Project's construction and O&M phases.

Table 7-1 Basic outline of the project ESMP

SN	E&S ASPECTS AND IMPACTS	MITIGATION MEASURES	MONITORING REQUIREMENTS
1	**Geology and hydrology** • Soil erosion and associated sedimentation • Pluvial flooding • Contamination of ambient soil, groundwater and surface water	Provided in Section 6.5 of the ESIA report.	Provided in Section 6.6 of the ESIA report.
2	**Waste and wastewater** • Generation of solid and liquid waste	Provided in Section 7.5 of the ESIA report.	Provided in Section 7.6 of the ESIA report.
3	**Noise and vibration** • Elevated levels of ambient noise • Elevated levels of ground borne vibration • Occupational exposure to noise and vibration	Provided in Section 8.4 of the ESIA report.	Provided in Section 8.5 of the ESIA report.
4	**Air quality** • Elevated levels of ambient dust • Elevated levels of ambient exhaust pollutants • Occupational exposure to air pollutants	Provided in Section 9.4 of the ESIA report.	Provided in Section 9.5 of the ESIA report.
5	**Biodiversity** • Habitat loss • Habitat fragmentation • Habitat degradation • Introduction of invasive and alien species • Induced displacement/ dispersal and lowered survivorship • Mortalities from OTL collisions • Mortalities from electrocution • Mortalities from lake effect	Provided in Sections 10.11 to 10.14 of the ESIA report.	To be provided in the project BMP and BMEP.

SN	E&S ASPECTS AND IMPACTS	MITIGATION MEASURES	MONITORING REQUIREMENTS
	• Roadkill and illegal hunting • Littering		
6	**Landscape and visual amenity** • Loss of visual amenity due to alteration of landscape character • Visual nuisance due to light spills • Nuisance and safety hazards due to glint and glare from PV panels	Provided in Section 11.4 of the ESIA report.	Provided in Section 11.5 of the ESIA report.
7	**Cultural heritage** • Degradation and/ or loss of undiscovered tangible cultural heritage resources • Disruption of local customs and intangible cultural heritage	Provided in Section 12.4 of the ESIA report.	Provided in Section 12.5 of the ESIA report.
8	**Traffic and transportation** • Increased traffic congestion along public roads	Provided in Section 13.4 of the ESIA report.	Provided in Section 13.5 of the ESIA report.
9	**Livelihoods and social services** • Physical displacement • Economic displacement • Accidental damage to public property and utility service interruptions • Increased pressure on public infrastructure and resources • Transient inflation within host communities • Employment creation and capacity transfer	Provided in Section 14.4 of the ESIA report.	Provided in Section 14.5 of the ESIA report.
10	**Community health, safety and security** • Spread of communicable diseases and increased local morbidity • Community health and safety incidents • Criminal and abusive offences against local community members	Provided in Section 15.4 of the ESIA report.	Provided in Section 15.5 of the ESIA report.

SN	E&S ASPECTS AND IMPACTS	MITIGATION MEASURES	MONITORING REQUIREMENTS
11	**Labour and working conditions** • Unequal access to employment opportunities and benefits due to discriminatory and/or exploitative recruitment practices • Poor working and living conditions • Occupational health and safety incidents • Forced labour • Child labour	Provided in Section 15.4 of the ESIA report.	Provided in Section 15.5 of the ESIA report.

7.3 Supporting/Complimentary Plans & Procedures

In alignment with the expected Project impacts (based on ESIA Volume II), the following table provides a list of plans and procedures that are expected as a minimum to be linked to the CESMP and/or OESMP. This includes some key requirements for inclusion to each plan.

Table 7-2 ESIA Required Plans and Procedures

Plan / Procedure	Project Phase	Purpose and Key Requirements
Biodiversity Management Plan (BMP)		• The BMP will define timeframes, targets, roles and responsibilities with regard to the implementation of safeguards related to the prevention, mitigation and offsetting of impacts on biodiversity.
Waste Management Plan	Construction, Commissioning & Operation	To identify site specific requirements for waste and wastewater treatment, containment of wastes (segregation, storage area specifications and locations), collection methodologies and transport (identification of licensed contractors and the process to engage), treatment/disposal (identification of licensed treatment and disposal sites), record keeping and reporting requirements related to waste and wastewater. To include measures to limit instances of contamination to soils and groundwater.
Occupational Health & Safety Plan	Construction, Commissioning & Operation	Identify the required controls for worker health and safety during the construction, commissioning, and operational phases. As a minimum, this plan will include: • Means of identifying and minimising, so far as reasonably practicable, the causes of potential hazards to workers. • Provision of preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances. • Provision of appropriate equipment to minimise risks, and requiring and enforcing its use. • Training of workers, and provision of appropriate incentives for them to use and comply with health and safety procedures and protective equipment. • Documentation and reporting of occupational accidents, diseases, and incidents. • Emergency prevention, preparedness, and response arrangements.
Emergency Preparedness and Response Plan	Construction, Commissioning & Operation	To identify the contingencies put in place for a variety of potential emergency situations relevant to the construction, commissioning, and operational phases. The plans will outline the response mechanisms, roles and

Plan / Procedure	Project Phase	Purpose and Key Requirements
		responsibilities, training requirements, internal communication, equipment, and relevant engagement with external stakeholders. Requirements for on-site equipment will be established based upon the potential emergency risks, including training provisions for site personnel regarding such equipment. This plan is to include spill response and contingency in the event of accidental leaks and spills.
Hazardous Material Storage Plan	Construction, Commissioning & Operation	The plan will identify locations for hazardous material storage, storage requirements (specifications of bunds and buildings/warehouses to ensure environmental and H&S protection, segregation requirements etc.) and handling procedures to minimise environmental risk. The plan will outline record keeping as per chain of custodies, requirements for MSDS and roles & responsibilities. Staff involved in chemical management, procurement or overseeing on-site deliveries shall be specified in the plan and provided with training for the provisions of this plan (all training to be linked to the training plan).
Environmental & Social Monitoring Plan	Construction, Commissioning & Operation	Monitoring is required to demonstrate compliance with national E&S standards and lender requirements. The monitoring plan is to specify monitoring requirements for all ESIA parameters (as specified in ESIA Volume II – as a minimum). The plan will therefore need to include: • What parameters need to be monitored and measured and at what locations. • The methods for monitoring measurement, analysis, and evaluation to ensure valid results. • The criteria against which compliance and performance should be measured. • When and at what frequency monitoring needs to be performed. • How the results from monitoring and measurement should be analysed and evaluated (independent or internal).
Traffic & Transportation Management Plan	Construction, Commissioning & Operation	The plan will identify any specific requirements for heavy, or abnormal loads, including timings of deliveries, specific routes (to minimise disruption), engagement mechanisms with external transport authorities (as per the SEP, e.g. local government). To include measures to minimise congestion, fuel use and risks to the public and site staff. Deliveries will be guided by a Traffic Management Plan.
Archaeological Chance Find Procedure	Construction	To identify the process for identifying and responding to incidental archaeological finds in the construction working area. It will include the process for halting works in that area, sectioning off potential artefacts/ structures, and external communication with relevant regional authorities as set out in the relevant Chance Find Procedure.
Cultural/Archaeological Management Plan	Construction & Operation	The Plan will be prepared to include the locations of known archaeological sites nearby the project sites and transit corridors, procedures to ensure their protection, required buffer zones, reporting protocols for any damage to these sites etc.

Plan / Procedure	Project Phase	Purpose and Key Requirements
Working Conditions and Terms of Employment Procedure	Construction, Commissioning & Operation	The EPC contractor and O&M Company will provide a plan detailing how working conditions and terms of employment are compliant with national labour, social security and occupational health and safety laws. The EPC Contractor and O&M Company will ensure that the following documents are prepared prior to the employment of workers. • Employment agreements and recruitment policies; • Equal opportunities and non-discrimination policy (incorporating maternity policies and policies associated with GBVH); and • Child and forced labour policies / procedures (covering recruitment fees and arrangements, as well as document (e.g. passport) retention.
Human Resources Policy (and related Procedures)	Construction, Commissioning & Operation	Human resource policies and procedures will be adapted appropriate to the size of the workforce required for operation and maintenance requirements. Policies and procedures must be prepared to demonstrate consistency with the requirements of national legislation and lenders requirements.
Workers Accommodation Plan	Construction	This plan will outline the process and standards for the accommodation for the Project workforce. It will include accommodation areas directly managed by the Project or rented/shared to accommodate direct Project employees and/or temporary or other contract staff (dedicated to the project). Accommodation areas in use by sub-contractor companies/staff (where staff are dedicated for the Project) will also be included.
Stakeholder Engagement Plan (SEP)	Construction, Commissioning & Operation	To identify project stakeholders, identify communication protocols for engagement with stakeholders. To identify frequency or event-based communication with stakeholders (i.e. for emergencies and specific grievances). To detail the grievance mechanism or provide a reference to a separate grievance mechanism for external parties.
Grievance Mechanism	Construction, Commissioning & Operation	To be included within or be linked to the SEP. To identify the procedure for external parties and all site staff to be able to raise issues, concerns and opportunities for improvement for any aspect of their employment on the project including issues relating to GBV/H and sexual exploitation. The mechanism shall be easily accessible (including for any vulnerable groups), non-discriminatory and provide a transparent process to raise concerns or complaints, which may be issued in an anonymous nature. The mechanism shall specify the roles and responsibilities of internal staff with regard to the grievance mechanism and the procedure for responding to received grievances, including the timeline for response, engagement mechanisms and record keeping.
Human Rights Policy	Construction, Commissioning & Operation	The statement policy will: • Be approved at the most senior level of the company;

Plan / Procedure	Project Phase	Purpose and Key Requirements
		• Informed by relevant internal and external expertise; • Stipulate the EPC's & O&M's human rights expectations of personnel, local communities, sub-contractors and other suppliers directly linked to the construction and operational phase of the project; • Be publicly available and communicated internally and to the relevant stakeholders; • Be reflected in the other policies and procedures to embed it throughout their construction and operational phase activities.
Gender Based Violence & Harassment (GBVH) Policy	Construction, Commissioning & Operation	The purpose of this policy will be to develop a safe, supportive, non-discriminatory workplace for all employees and create a common awareness and understanding that Gender Based Violence & Harassment, Sexual Exploitation & Abuse and Sexual Harassment have no place in this project. It will aim to create a clear system for reporting, company response and company/legal sanctions for such behaviour.
Security Plan	Construction & Operation	The security plan will be based on a security risk assessment of the reasonably foreseeable security risks (linked with security risks in the Emergency Preparedness and Response Plan), and tailored with the necessary management provisions, staffing requirements, equipment, training and defined processes to implement effective mitigation to manage or prevent these risks. The security plan will ensure applicable alignment to the necessary codes of conduct required by law enforcement under the United Nations principles for Law Enforcement Officers.
Local Recruitment Plan	Before start of Construction & Operation	This plan will provide set of actions for the recruitment of local workforce. The plan will detail the procedure for effective recruitment of local staff, the positions that could be filled by unskilled, semi-skilled and skilled local workforce, mechanisms that will be in place to ensure there is non-discrimination of women in assessing recruitment procedures and the training ton be provided for each job role.
Influx Management Plan	Construction	The EPC Contractor will develop an Influx Management Plan to provide a clear set of actions that will be undertaken for the management and mitigation, monitoring and evaluation of impacts related to worker influx in the Project area.
Local Content Plan	Construction	This plan will clearly identify the Project commitment to purchasing goods and services (where practicable without compromising on the quality and standard requirements for the Project). It will also set expectations with regards to the extent goods and services can be purchased from the local market in order to benefit local businesses without potentially leading to higher prices for local consumers. This plan will be shared with local businesses interested in providing goods and services to the Project.
Supply Chain Management Plan	Before the start of Construction	The Project Company will develop a Supply Chain Management Plan will include: • The requirement for Project Company's HR policy and procedures and worker Code of Conduct will be applied to all suppliers

Plan / Procedure	Project Phase	Purpose and Key Requirements
		• The pre-qualification assessment & process to be undertaken prior to engaging core suppliers; • Monitoring/audits to be undertaken to evaluate suppliers' compliance and adequacy of implemented measures, etc.
E&S Supplier and Vendor Management Plan	Before the start of construction	ACWA Power/ Project Company will develop an E&S Supplier and Vendor Management Plan for suppliers and contractually require the EPC Contractors to undertake supplier/vendor E&S risk assessment for their suppliers and review potential supplier/vendor labour issues and risks.
De-commissioning Plan	De-commissioning	Decommissioning Plan will be developed 12 months prior to decommissioning, and this will include detailed methods for material re-use, recycling, and disposal of wastes.

7.3.1 Other Recommended Plans and Procedures

Besides the required ESIA plans and procedures stated above, the following plans and procedures are also recommended for development and implementation as part of the ESMS.

Table 7-3 Recommended Plans and Procedures

Plan / Procedure	Project Phase	Purpose and Key Requirements
Pollution Prevention and Response Plan	Construction, Commissioning & Operation	Identify site specific requirements for the prevention of pollution and how to manage pollution incidents. To include the identification of high-risk areas on a plan and the location of spill kits (and contents of spill kits). To identify required contact details in the event of an incident and contractors that are available on a quick response contract to assist with clean up. Where necessary this should link with the SEP for any external communications. To identify staff that require training in regard to the plan. The plan should include provisions for recording of any incidents in a separate register, to ensure close out and implementation of corrective and preventative actions.
Site Inspection & Audit Plan & Procedure	Construction & Operation	To specify the timing and frequency of inspections (e.g. daily, weekly walkovers) and audits (including internal & external independent audits for the lenders as appropriate). To detail the methodology of such inspections and audits to ensure Environmental and Social Issues required in Uzbekistan required by project lenders are adequately covered. For internal audits, the procedure should identify the audit scope (site, laydown areas, accommodation areas, sub-contractor areas etc.), audit criteria (e.g. CESMP, OESMP, ESMS), selection process for audit evidence, reporting format and auditor competence requirements. The Procedure should specify definitions of non-conformance, observations and best practices, as well as detailing the mechanisms for issuance and follow up of Non-Conformance reports, including time periods for action and

Plan / Procedure	Project Phase	Purpose and Key Requirements
		the implementation of corrective and/or preventative measures. The process to engage with the external independent lenders' auditors should also be listed and linked with the SEP as appropriate.
Material handling and Storage Procedure	Construction, Commissioning & Operation	Should identify locations for material storage, storage requirements and handling procedures to minimise environmental and H&S risks. As appropriate this plan should be linked to or inclusive of the Hazardous Material Storage Plan and H&S Plan. Specific method statements regarding the handling of materials shall be detailed, as well as training requirements for staff involved in such activities.
Fuel & Chemical Unloading Procedure	Construction, Commissioning & Operation	To identify locations for fuel and chemical unloading, associated training requirements and associated pollution attenuation/spill response equipment that are to be in place regarding any unloading of fuel to larger tanks or chemicals to storage areas on-site. This should be linked or inclusive to the pollution prevention plan.
Environmental & Social Training Plan	Construction, Commissioning & Operation	To identify specific staff members for training and the type (i.e. classroom, practical, toolbox talks) how/when this is to be delivered, the frequency of training and whether follow up training provisions are required. The training should be linked to the specific content of the listed plans and procedures, or key risk activities that may be identified from on-site method statements.

8 MONITORING

Environmental monitoring is required during construction, commissioning and operation to evaluate whether the project is in compliance with applicable national regulations and lender requirements.

8.1 Monitoring Requirements from the ESIA

An Environmental and Social Monitoring Plan will be developed for the Project's construction, commissioning and operational phases, with the aim of guiding the monitoring of impacts and respective avoidance, mitigation and/or offset measures described in the ESIA Volume II. Fundamental guidance for tracking the Project's E&S impacts, and related controls covers shall cover the following aspects:

- What parameters need to be monitored and measured and at what locations;
- The methods for monitoring measurement, analysis and evaluation to ensure valid results;
- The criteria against which compliance and performance should be measured;
- When and at what frequency monitoring needs to be performed;
- How the results from monitoring and measurement should be analysed and evaluated (independent or internal);

The outcomes of the monitoring regime should ensure;

- The timing of monitoring and measurement is coordinated with the need for analysis and evaluation of results;
- The results of monitoring and measurement are reliable, reproducible and traceable; and
- analysis and evaluation are reliable and reproducible and enable the project to report trends.

8.2 Monitoring Data

Monitoring results should be compared against relevant standards, permit requirements, required thresholds, received complaints, audit findings, CESMP and OESMP requirements. The Environmental and Social Management team for the EPC Contractor or O&M Company will need to define appropriate action to follow in the instance that any exceedances in monitoring limits are confirmed or adverse impacts identified, including:

- Communication protocol in the event that an exceedance is identified;
- Internal review process of recently performed maintenance and inspection;

- Review of previous monitoring data to identify any potential associated variations or trends in results;
- Recommendations for quarantine of equipment or change in work practices; and
- Review of monitoring frequency to ensure the issue does not re-occur.

The repetition of measurements is an essential part of monitoring as it detects changes over time and should alert to potentially positive or negative effects of an activity. Adverse effects should trigger a review of mitigation measures and determination of the likely source of the impact. Non-detection may demonstrate a lack of effect, success of mitigation measures or the requirement to continue monitoring over a longer period of time.

Data from the monitoring for comparison against baseline and all previous monitoring efforts to identify trends in condition and make inferences on the success of implemented mitigation measures.

9 ORGANISATIONAL CAPACITY

9.1 Roles and Responsibilities

The project ESMS will require competent personnel and sufficient allocation of resources to ensure effective implementation in practice.

9.1.1 Project Company (Accountable Party)

The Project Company will designate an expert who will have overall accountability for environmental and social management, compliance and implementation of related Project Company policies. In addition, the Project Company will ensure that the EPC Contractor and O&M Company allocate sufficient resources in the recruitment of competent personnel and in addressing HSE related issues.

This is required at the Project Company level, as the project company is the ultimate permit holder and recipient of Project finance.

9.1.2 EPC Contractor / O&M Company (Responsible Party)

It is expected that the Project Company will contractually delineate responsibility for environmental and social management and compliance to the EPC Contractor/O&M Company for the respective project phases.

It is therefore expected that the EPC Contractor and O&M Company will specify certain roles and responsibilities for ESMS implementation to Project staff, as recommended below.

9.1.3 Management Team

In order to effectively implement the Project ESMS, management will need to:

- Fully support the implementation of the Project Company's E&S Policy and the internally developed ESMS;
- Ensure that the Project Company's E&S Policy is included/referenced as part of sub-contractor agreements;
- Promote a positive E&S culture and good practices by personal example and leadership;
- Review and approve EPC Contractor / O&M Company environmental and social management budgets, resourcing and staffing;
- Ensure resources (human and financial) are allocated appropriately in practice to manage the ESMS;
- Conduct regular site tours that include a specific focus on E&S elements;

- Promote discussion of E&S management at team meetings; and
- Monitor and report on environmental management and performance.

9.1.4 Responsible for Environmental & Social Management

The EPC Contractor and O&M Company will need to delegate responsibility for implementation of the ESMS and wider environmental and social management and compliance to a full-time member(s) of staff at the Project site.

The staff may be the HSE Manager or the Environmental and Safety Manager, a member of the HSSE Team or a specific Environmental & Safety Officer. Regardless of the 'title' of this role, this person will be the primary project contact beneath the Project Company to implement the ESMS and will report to management, who will further report to the Project Company.

A guide for the applicable E&S responsibilities of this role are listed below:

HSE / E&S MANAGER (OR COMMENSURATE POSITION)

- Fully support the implementation of the Project Company's E&S Policy;
- Prepare, implement and manage the EPC Contractor / O&M Company project specific ESMS;
- Engage with the Project Company HSE Manager regularly in regard to E&S management;
- Oversee and ensure execution of the environmental and social management programmes by other project parties (such as sub-contractors and key suppliers);
- Review EPC Contractor/ O&M Company personnel, qualifications, competency and environmental performance;
- Monitor the Project to ensure environmental and social compliance (including for sub-contractors and supplier - as per the scope of the ESMS);
- Advise management on matters pertaining to the environmental and/or social elements;
- Investigate environmental and social issues, incidents and non-conformances, implement corrective actions and report those to the management/relevant authorities;
- Maintain applicable environmental and social records as required by the ESMS (e.g. incident registers, NCR reports, corrective action reports, grievance register etc.);
- Ensure monitoring programmes are implemented by qualified personnel and report the results to the Project management for review and as a basis for continuous improvement;
- Display and monitor site bulletin boards to ensure they remain 'live' and 'up-to-date' with relevant environmental & social information;

- Coordinate, plan, formulate and/or deliver environmental and social induction training to all project personnel (including subcontractors) as well as regular toolbox talk environmental training sessions;
- Organise programmes and activities to promote environmentally responsible conduct in the prevention of injury, ill health and environmental impact throughout the workforce;
- Stop any unsafe activity which is not compliant with environmental legislation or lender requirements, and correct such work practice and/or conditions before allowing work to resume/commence;
- Act as point of contact for any sub-contractor with regard to environmental issues;
- Ensure that each sub-contractor is aware, compliant and implementing the requirements of the ESMPs;
- Review subcontractor's personnel, qualifications, competency and environmental performance; and
- Undertake regular internal ESMS audits to assess compliance and implement corrective & preventative actions – audits are to include all sub-contractors at the project.

HSE ENGINEER OR E&S ENGINEER

- Fully support the implementation of the Project Company E&S Policy;
- Implement and assist management of the EPC Contractor / O&M Company project specific ESMS;
- Work with and engage with the EPC/O&M HSE/E&S Manager regularly in regard to E&S management;
- Actively ensure that environmental and social management programmes by other project parties are being undertaken as per project requirements (such as sub-contractors and key suppliers);
- Monitor the Project to ensure environmental and social compliance (including for sub-contractors and supplier - as per the scope of the ESMS);
- Advise HSE/E&S Manager on matters pertaining to the environmental and/or social elements;
- Actively investigate environmental and social issues, incidents and non-conformances, implement corrective actions;
- Maintain applicable environmental and social records as required by the ESMS (e.g. incident registers, NCR reports, corrective action reports, grievance register etc.);
- Ensure monitoring programmes are undertaken and reported;
- Prepare and monitor site bulletin boards to ensure they remain 'live' and 'up-to-date' with relevant environmental & social information;

- Alongside the HSSE/E&S Manager, coordinate, plan, formulate and/or deliver environmental and social induction training to all project personnel (including sub-contractors) as well as regular toolbox talk environmental training sessions;
- Undertake programmes and activities to promote environmentally responsible conduct in the prevention of injury, ill health and environmental impact throughout the workforce;
- Stop any unsafe activity which is not compliant with environmental legislation or lender requirements, and correct such work practice and/or conditions before allowing work to resume/commence;
- Alongside the HSSE/E&S Manager, act as point of contact for any sub-contractor with regard to environmental issues;
- Monitor on a daily basis that sub-contractor is aware, compliant and implementing the requirements of the ESMPs;
- Alongside the HSSE/E&S Manager, review subcontractor's personnel, qualifications, competency, and environmental performance; and
- Alongside the HSSE/E&S Manager, undertake regular internal ESMS audits to assess compliance and implement corrective & preventative actions – audits are to include all sub-contractors at the project.

9.2 Environmental & Social Awareness and Training

E&S implementation will not be effective unless the project workforce is aware of their specific responsibilities with regard to environmental protection and social safeguarding. It is therefore necessary for the EPC Contractor/O&M Company to ensure that the workforce is trained appropriately according to the relevant elements of the project ESMS.

Tailored training requirements relevant to elements of works will need to be developed and defined as part of the ESMS (e.g. personnel associated with waste management should require training on relevant components of the waste management plan).

9.2.1 Type of Training Sessions

The EPC Contractor/O&M Company (and as applicable the Sub-contractors) will deliver applicable elements of E&S training within:

- Induction Training
  - This training will be provided to the entire workforce and include key environmental and social components linked to the E&S Policy and developed ESMS; that are applicable to all employees.
- Tool-Box Talk
  - E&S tool-box talk training sessions will be provided on a regular basis to remind workers of E&S considerations when undertaking normal day-to-day activities; and
- Specific training sessions on ESMS and E&S Management Plans
  - These trainings will be delivered to ensure staff are competent to implement the ESMS, or undertake activities that may have inherent E&S risks or potential impacts to receptors. All staff with specific responsibilities and with authority to implement mitigation measures and monitoring/audit commitments should be trained in regard to such plans/procedures.

9.2.2 Planning of Training

In order to record identified training needs, the EPC Contractor/O&M company will develop and maintain a project environmental training matrix (falling under wider HSE training) to identify the training type and frequency required for each staff role.

A training plan/programme will also be prepared to set out the frequency of training requirements.

All training material will be prepared in advance and documented. It will be prepared in English language and applicable local languages or those languages that apply to the engaged workforce (i.e., Uzbek, Chinese and Russian as applicable). Where necessary translators may be required for specific sessions.

9.2.3 Content of Training Sessions

INDUCTION TRAINING

During project inductions, all project workforce and visitors will receive an element of E&S induction classroom training, which as a minimum will include an overview of:

- The Project Company's E&S Policy;
- Contact details for the EPC Contractor/O&M Company E&S Manager and E&S Engineer;

- Main topics of E&S risk/impact (which will include critical habitat/sensitive species, waste, archaeological buffer zones, hazardous materials, receptors or communities and ethnic minorities (i.e., the gypsy community);
- Environmental incident response and internal reporting requirements including who shall be contacted in the instance of an incident;
- Duty of care, highlighting that all staff have a responsibility to carry out their duties in accordance with the Project Company's E&S Policy and related ESMS and to report any and all environmental incidents.

The induction shall make it clear that interference with any wildlife or archaeological remains shall be strictly prohibited. The training session will also highlight the importance of maintaining environmental and social awareness; the seriousness of environmental and social requirements and that compliance is a condition of employment.

TOOLBOX TALK ENVIRONMENTAL & SOCIAL TRAINING SESSIONS

These sessions will vary depending on the risks, impacts, opportunities and compliance related to specific activities by construction/operational teams, but can be expected to include the following (provided as examples):

- Air quality emissions and control measures for vehicles, plant and equipment drivers/operators;
- Dust control and dust mitigation techniques for heavy vehicles' drivers and dust generating equipment operators;
- Erosion and sediment control for operators of earth moving equipment;
- Hazardous materials handling including handling, transportation and storage of hazardous materials as well as maintenance and refuelling of vehicles and machinery;
- Spill prevention and response for personnel involved in the storage of fuel and other hazardous materials;
- Habitats and species (flora and fauna) of ecological importance and mitigation measures for all construction personnel. This includes the actions to be implemented in case of trapped or injured fauna etc.
- Noise control and mitigation measures for vehicles, plant and equipment drivers/operators;
- Traffic control and mitigation techniques for vehicle drivers (e.g. cars, buses, heavy goods vehicles, etc.);
- Waste management and chemicals and hazardous materials management, including transportation and disposal for all construction personnel;
- Emergency management and incident response for all construction personnel;
- Grievance procedure including methods to submit a complaint, review, and response period; and

- Gender Based Violence & Harassment (GBVH).

SPECIFIC TRAINING SESSIONS ON ESMS AND E&S MANAGEMENT PLANS

Training sessions on the ESMS or specific activities or plans/procedures will need to be tailored and delivered to staff based on their specific content and key considerations. As a minimum, training will be provided for the following management plans/procedures due to the specific risks associated with these aspects:

- Pollution Prevention and Control Plan;
- Spill Response Procedure;
- Waste Management Plan;
- Water Management Plan;
- Occupational Health and Safety Plan;
- Community Health and Safety Plan;
- Archaeological Chance Find Procedure;
- Cultural/Archaeological Management Plan;
- Gender Based Violence and Harassment Policy.

9.2.4 Training Records

Further to the training being undertaken the environmental training records will identify as a minimum:

- Description and purpose of training;
- Date and location;
- Trainer and attendees (with attendance signatures);
- Photos or other documents as attachments to evidence the training.

A consolidated record of training undertaken by all workers will be maintained and will be comparable against the training matrix.

10 AUDIT PROGRAMME

Auditing is an integral requirement of any management system and should be considered as a continual process to ensure the successful implementation of the ESMS.

10.1 Internal Audits

The ESMS will establish, implement, and maintain an internal audit programme that identifies the frequency, methods, responsibilities, planning requirements and reporting of audits and inspections.

When establishing an audit and inspection programme, the organisation should consider the potential frequency and significance of environmental and social risks relative to the construction and operational phase and adjust the audit scope and frequency accordingly.

When developing and undertaking audits the following will need to be established:

- Define scope, audit criteria and the objectives of each audit;
- Select audit staff competent in the audit process and subject matter; and
- Ensure that audit results are reported to relevant senior management.

The audits will be undertaken on a regular basis during the construction/commissioning phase, as set out in the project ESAP.

10.2 ACWA Power Corporate Audits

It is expected that the Developer's corporate HSSE team will audit the Project Company's management system on an annual basis as a minimum.

10.3 Lenders Monitoring and Reporting

Monitoring requirements will be established with the Project lenders and monitoring reports will be reviewed and issued to the lenders by the Project Company (and contractors) and an Independent Environmental and Social Committee (IESC). These reports are likely to be based upon site visits to evaluate the implementation of both the ESAP (a covenant to the loan), and the suitability & effective of the established ESMS in practice. The frequency for these will be stated in the ESAP.

11 NON-CONFORMITY AND CORRECTIVE ACTION

All non-conformances identified during audits, inspections and monitoring activities will be recorded and followed up as non-conformity. Clear processes for actions shall be provided in the Project Company ESMS Implementation Manual for implementation throughout the project duration.

Non-conformances are instances where project compliance obligations (such as a legal requirement, or lender standard) are not being fulfilled, or cannot be evidenced. Examples of non-conformity include, but are not limited to:

- Breach of an environmental standard;
- Commencement of works without an approved risk assessment and method statement that covers environmental issues identified herein;
- No review of risk assessment and method statements following any significant changes in requirements that could adversely impact the environment;
- Appointment of a waste transport/disposal service provider that is not appropriately licensed;
- Failure to comply with waste storage/disposal requirements as identified by risk assessment and/or method statement;
- Failure to comply with chemical storage and/or handling requirements;
- Un-containable or uncontrollable spills of fuels or chemicals;
- Undertaken works outside the scope defined within the risk assessment and method statement; and,
- Discharge of untreated, contaminated waste water to the environment.

Each non-conformance and near miss will be recorded utilising a developed reporting process. All non-conformances and near misses shall include the following information:

- Location and description of the non-conformance and the criteria/requirement that has been breached;
- The proposed corrective action including who holds responsibility for undertaking this action;
- The proposed preventative action to ensure against reoccurrence of the non - compliance;
- Any required monitoring and follow up; and
- Key performance indicators and a deadline for the successful completion of the corrective and preventive action.

11.1 Corrective Action

Any situation or condition that is non-conforming to binding performance standards or otherwise poses an imminent risk to the environment, or social welfare should be immediately resolved.

It is expected that a corrective action plan will be developed to respond to individual NCRs. The corrective action plan shall include determination of root cause, proposed actions, timelines, required resources and any changes needed to ESMS documentation. The corrective action plan should be approved by the expert/ manager spearheading the ESMS.

Records of implemented corrective actions shall also be maintained.

If a situation or condition cannot be corrected immediately, temporary measures such as necessary for the protection of the environment should be implemented.

12 EMERGENCY PREPAREDNESS AND RESPONSE

The likelihood of an E&S incident can be minimised by effective risk management planning and development of applicable response plans as part of an ESMS.

All risk assessments and method statements will need to include consideration of the potential for environmental incidents. Suitable incident response equipment, should be maintained at appropriate locations on site and Project staff be suitably trained to use such equipment and respond to such emergencies.

The Project will prepare and implement an Emergency Preparedness and Response Plan to include requirements for co-ordination with the applicable external agencies (i.e. emergency services), impacted stakeholders and statutory authorities in the instance that a pollution incident occurs.

The plan will identify procedures for reasonably foreseeable emergency situations. As per the Developer's corporate ESMS Implementation Manual, this is required to include drills at the Project site and any relevant training to specifically involved personnel.

When establishing the Emergency Preparedness and Response Plan, the following should be considered:

- The most appropriate method for responding to an emergency situation;
- Internal and external communication modes, channels and timings;
- The action required to prevent or mitigate environmental impacts;
- Mitigation and response actions to be taken for different types of emergency situations;
- The need for post-emergency evaluation to determine and implement corrective and preventative actions;
- Periodic testing of planned emergency response actions;
- Training of emergency response;
- A list of key personnel and aid agencies, including contact details (such as fire department, spillage clean-up services);
- Evacuations routes and assembly points; and
- The possibility of the need for mutual assistance from neighbouring organisations/projects.

12.1 Incidents

Incident investigation and analysis will need to be undertaken in co-ordination with the provision of Element 10 established in the Developer's HSSE Management System Framework.

In summary, this requires clear processes for incident reporting, response, investigation, analysis, follow up and documentation.

13 STAKEHOLDER ENGAGEMENT

The project has developed a SEP, which will be implemented during construction, commissioning and operations. This will also need to be updated and made applicable prior to the operational phase. The SEP includes a suitable grievance mechanism to allow local community complaints to be raised in a clear process.

Note: *All processes relating to Stakeholder Engagement should refer to the Project Specific Stakeholder Engagement Plan (SEP).*

Stakeholder engagement can be described as a systematic effort to understand and involve stakeholders and their concerns in the Project activities and decision-making processes. Stakeholders are defined as any group or individual who can affect, or can be affected by, the Project.

The main objectives for stakeholder engagement are:

- To inform the relevant stakeholders about the Project;
- To capture views and concerns of the relevant stakeholders with regard to the project;
- To enhance ownership of the project within the host community;
- To provide a basis for stakeholder participation in impact identification and mitigation.

For Projects that have environmental and social impacts, consultation is not a single engagement but a series of opportunities to create understanding about the Project among those that are likely to be affected or might have an interest in it, and to learn how these stakeholders view the project and its related risks, impacts, opportunities, and mitigation measures. Listening to stakeholder concerns and feedback can be a valuable source of information to help identify environmental and social risks (real and perceived) and improve project management.

13.1 Grievance Mechanism

13.1.1 Worker Grievances

The SEP includes a grievance procedure for workers to raise workplace concerns. The procedure includes an appropriate level of management and address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned, without any retribution. The mechanism allows for anonymous complaints to be raised and addressed.

The grievance mechanism must not impede access to other judicial or administrative remedies that might be available under the law or through existing arbitration procedures, or substitute for grievance mechanisms provided through collective agreements.

All staff will need to be informed of the grievance procedure during their induction to the project and the procedure will be made readily available and easily accessible.

13.1.2 Third-Party Grievances

The SEP also includes a procedure for third-party grievances that establishes methods to receive and register communications from third-party (Project Affected Persons and Interest based stakeholders). This includes:

- A method to screen and assess the issues raised and determine how to address them;
- A method to provide, track, and document responses, if any; and
- A method to adjust the ESMS management program, as appropriate, in response to external grievances.

The grievance procedure shall be reviewed and updated (as applicable) to ensure it remains scaled to the risks and adverse impacts of the project and include consideration of any affected stakeholders.

It must seek to resolve concerns promptly, using an understandable and transparent consultative process that is culturally appropriate and readily accessible, and at no cost and without retribution to the party that originated the issue or concern. The mechanism should not impede access to judicial or administrative remedies.

14 COMMUNICATION

The ESMS will establish, implement, and maintain processes needed for internal and external communication relevant to environmental and social performance of the Project.

Lines of communication relevant to the construction phase will be clearly defined within the CESMP whilst lines of communication relevant to the operational phase will be specified in the OESMP.

Associated processes will establish:

- What will be communicated;
- When it will be communicated;
- With whom to communicate;
- How to communicate.

When establishing communication processes relevant to the ESMS, particular note will be made to

- Compliance obligations, including any reporting requirements to the statutory environmental authority.
- Reporting requirements required by the Project lenders.

15 DATA MANAGEMENT AND RECORD KEEPING

The implementation of the ESMS will generate data, which shall be managed purposively. The appropriate management of records is a requirement of any successful ESMS and can be used to track progress, review effectiveness and demonstrate compliance.

The ESMS relevant to both the construction, commissioning and operational phases should include the collation of the records including (but not limited to) the following:

- E&S induction and training records;
- Relevant records of competence/qualifications;
- Accident Investigation Reports;
- Grievance register;
- Internal Audits reports (including close - out);
- Non-Conformance Reports;
- Incident Reports;
- E&S Inspection and Audit Reports (including corrective action reports);
- E&S Monitoring Results;
- Waste Manifest Forms and Chain of Custodies;
- E&S Risk Assessments and Method statements;
- Equipment Inspections/Certifications;
- Independent Audit Reports for Lenders (including corrective action reports); and
- Emergency events.

Such records will need to be included on the ESMS register and updated as applicable.

16 REVIEW

The Project's ESMS documentation will be a 'live resource' and will need to be reviewed and updated in relation to changes in project circumstances, activities, environmental sensitivities and future requirements defined by respective regulatory authorities and Project Lenders.

The ESMS should be regularly reviewed according to any changes in construction, commissioning, or operational activities, new (applicable) regulation and in response to results from monitoring, audits and inspection.

Reviews should be undertaken at a frequency to ensure adequacy of the ESMS and to ensure that all potentially significant adverse impacts are identified and that associated control measures are appropriate to the Project.