

ASCENT

**Accelerating Sustainable and Clean Energy Access
Transformation Program**

**Standard Environmental and Social
Management Plan (ESMP)**

**Template for the Rehabilitation/Upgrade of
Distribution Lines in Non-Sensitive Locations**

December 2025

[COUNTRY NAME]

[NAME OF MINISTRY/IMPLEMENTING AGENCY]

[LOGO OF MINISTRY]

[NAME OF PROJECT]

[PROJECT CODE]

**ENVIRONMENTAL AND SOCIAL
MANAGEMENT PLAN
(ESMP)
for the Rehabilitation/Upgrade of
Distribution Lines in Non-Sensitive Locations**

[BORROWER APPROVAL AND DISCLOSURE DATE]

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Abbreviations and Acronyms

Include an alphabetized list of all the abbreviations and acronyms used in the document.

Acronym	Acronym in Full
AC	Alternating current
AFD	Agence Francaise de Développement
AfDB	African Development Bank
AFE	Eastern and Southern Africa
ASCENT	Accelerating Sustainable and Clean energy Access Transformation
AIIB	Asian Infrastructure Investment Bank
C-ESMP	Contractor Environmental and Social Management Plan
CHS	Community Health and Safety
CoC	Code of Conduct
COMESA	Common Market for Eastern and Southern Africa
dB	Decibels
DC	Direct current
DL	Distribution Line
DRE	Distributed Renewable Energy
E&S	Environmental and Social
EHSGs	Environmental, Health and Safety Guidelines
EMF	Electric and Magnetic Fields
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESIRT	Environmental and Social Incident Reporting Toolkit
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESSs	Environmental and Social Standards
FI	Financial Intermediary
GBV	Gender-based Violence
GBVAP	Gender-based Violence Action Plan
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
HWMP	Hazardous Waste Management Plan
IDA	International Development Association
IFC	International Finance Corporation
IP/SSAHULTC	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
LMP	Labour Management Procedures
LV	Low Voltage
MPA	Multi Programmatic Approach
MV	Medium Voltage

OHS	Occupational Health and Safety
PAD	Project Appraisal Document
PAP	Project Affected Person
PCR	Physical Cultural Resources
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
PPP	Public Private Partnership
PUE	Productive Use of Energy
RAP	Resettlement Action Plan
RoW	Right of Way
RPF	Resettlement Policy Framework
SEA/SH	Sexual Exploitation and Abuse/ Sexual Harassment
SEP	Stakeholder Engagement Plan
SHS	Solar Home Systems (SHS)
SMP	Security Management Plan
ToR	Terms of Reference
VAC	Violence Against Children
VRE	Variable Renewable Energy
WB	World Bank
WBG	World Bank Group
WHO	World Health Organization

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

FOR ASCENT ROLLOUT TO NEW COUNTRIES

1. Context

The Accelerating Sustainable and Clean Energy Access Transformation (ASCENT) Multi Programmatic Approach (MPA) aims to accelerate access to sustainable and clean energy in Eastern and Southern Africa (AFE). The project will establish an ASCENT Regional Acceleration Platform, managed by the Common Market for Eastern and Southern Africa (COMESA), which will drive implementation of Pillar 1 from the regional level, supported by additional actions and activities in participating countries. The Acceleration Platform will support both Phase 1 countries (for implementation of their projects), and to assist those countries still to enter the Multi Programmatic Approach (MPA) to prepare. In addition, the Platform will provide support to Distributed Renewable Energy (DRE) and clean cooking companies active in the region to accelerate their efforts and mobilize capital. Specifically, the Acceleration Platform will (i) support AFE countries in their adoption of digital platforms and tools facilitating management, financing, verification and monitoring of their energy access efforts, (ii) enact a digital monitoring, reporting and verification (D-MRV) platform at the regional level allowing aggregation from countries and the private sector and enabling the generation of carbon revenues and/or other climate/impact-related result-based financing; (iii) establish a Project Preparation Facility providing market intelligence and technical assistance both to Government agencies and the private sector, including for identification and enabling of cross-border electrification solutions; (iv) support planning processes and adoption of best practices and harmonization of policy and regulatory frameworks; (v) deliver energy access data and statistics, facilitating knowledge exchange and driving skill development, and (vi) provide support for monitoring and evaluation of the overall ASCENT program.

2. Project Objectives and Scope of Works:

[Project description, including identification of components and activities, from PCN, PAD, Energy Master Plan or elsewhere, concisely describes the proposed subproject and its geographic location, environmental, social, and temporal context, including any offsite investments that may be required, e.g. access roads, equipment yard, etc. Insert information on the names of locations of the Distribution Line, their respective maps, voltage, number of kilometers, the engineering design, and site lay-out plans, expected activities and works, expected duration of works, if known supporting facilities, and any salient physical characteristics of the project site/s, including information on any Associated Facilities as well as other projects that could lead to cumulative impacts.]

The objective of the ASCENT MPA in [insert name of formal sovereign borrower name] is [Project Development Objective, from Project Concept Note (PCN), Project Appraisal Document (PAD), or other available documentation]. Also, add project justification [in line with Project Concept Note].

The proposed rehabilitation of power distribution line/s [provide name of subproject, proposed voltage] is/are located [provide name of location and GPS coordinates] and is [length in km]. [include map showing location of the distribution line/s, and layout plan, where applicable e.g. associated substation].

The project entails a series of activities which include among others, the following: [edit and add as appropriate following the different project development phases suggested below]:

A. Design and Planning Stage

- Planning, Surveying and design of the power line.
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-

B. Construction Stage

- Storage of equipment, construction materials and securing accommodation for workers.
- Clearing of right-of-way as necessary along the existing route.
- Excavation of the pole pits.
- Erection and dressing of poles.
- Conductor stringing and tensioning.
- Installation of other accessories including transformers, Air break switches, Load break switches and metering units among others.
- Services connection.
- Pre-commissioning tests and commission.

Construction activities are anticipated to last for [provide estimated construction period] Months.

C. Operation Phase

- Routine maintenance activities including Transportation of electrical poles, Storage of equipment, and construction materials.
- Excavation of the pole pits.
- Erection and dressing of poles.
- Conductor stringing and tensioning.
- Installation of other accessories including transformers, Air break switches, Load break switches and metering units among others.
-
-

D. Decommissioning/ Rehabilitation Phase

- Excavation of the pole pits.
- Removal of installed electrical materials such as poles, conductors and transformers.
- Disposal of decommissioned materials, such as poles, conductors, transformers, transformer oil, and associated construction debris/ waste.
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-

3. ESMP Objectives

The objectives of this Environmental and Social Management Plan (ESMP) is to identify the site-specific environmental and social impacts associated with the proposed Distribution Line rehabilitation activities and to proffer appropriate mitigation measures to ensure compliance with relevant environmental and social policies of the Government of [insert formal sovereign borrower name] and the World Bank Environmental and Social Framework (ESF).

4. Legal and Regulatory Framework

It is a requisite of the World Bank that investments it finances comply with the host country's national standards as well as other relevant international environmental and social policies. In addition to the relevant national legislation, the Project should address the applicable World Bank Environmental and Social Standards (ESS) regarding environmental and social issues. When the host country's regulations differ from the levels and measures presented in the World Bank ESF, projects will be required to achieve whichever is more stringent. This also applies if there are differences between National and Sub-National standards, the sterner standard must be followed.

[If the analysis of the applicable legal and regulatory framework has been already done in another document (i.e., ESMF), then a summary and cross reference to that document would suffice]

National Legal Framework

The national environmental regulatory framework applicable to Electrical Energy Distribution projects includes the following regulations and guidelines [as applicable]:

[Insert a list of key relevant regulations and guidelines on assessing and managing impacts of distribution lines. Keep descriptions of laws and regulations brief and only describe elements applicable to subproject activities.]

World Bank Environmental and Social Standards and EHS Guidelines

The ESF sets out the World Bank's commitment to sustainable development through a Bank Policy and a set of Environmental and Social Standards that are designed to protect people and the environment from adverse impacts of Bank-financed projects and to promote green, resilient, and inclusive sustainable development. ESF offers broad and systematic coverage of environmental and social risks and makes important advances in areas such as transparency, non-discrimination, public participation, and accountability. This is achieved through the implementation of ten (10) [Environmental and Social Standards](#) which constitute the ESF, and which set out the requirements that apply to projects funded by the World Bank.

The ESSs and their relevancy are outlined in Table 1

Table 1: ESS Objectives and Relevance to the Project.

Environment and Social Standards	Main/Key Objective	Relevance to Project
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts;	To identify, evaluate and manage the environment and social risks and impacts of the project in a manner consistent with the ESSs	ESS1 is relevant for the project because project activities are expected to pose moderate environmental and social risks such as Terrestrial habitat alteration, Aquatic habitat alteration, Electric and magnetic fields, Hazardous materials [add summary of identified site specific E&S risks and impacts]
ESS 2: Labor and Working Conditions	To promote safety and health at work.	The upgrade of distribution lines is likely to engage direct and contracted project workers, who could be exposed to different types of OHS risks from project activities. The number of project workers is estimated to be XX [insert the estimated number of workers involved in the installation and operation of the distribution line]. The following OHS risks are anticipated, among others: Live power lines, Working at height, Electric and magnetic fields, Exposure to chemicals.
ESS3 - Resource Efficiency and Pollution Prevention and Management	To promote the sustainable use of resources, including energy, water and raw materials.	This standard is relevant because construction activities can generate varying levels of pollution, pollution, including disposal of hazardous and non- hazardous wastes and pollution to air, water, etc. During Project construction, the project solid waste generated will mainly consist of used and scrap metals (cables and steel scraps) , plastics from packing in equipment, wooden pallets, cardboard boxes etc. The potential hazardous waste generated include[Materials for pole installation may come from illegal gravel and sand mines, or wood from illegal logging contributing to secondary negative impacts in these areas].
ESS 4: Community Health and Safety	To anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and non-routine circumstances.	During construction, community health and safety issues and risks include noise vibration, dust, road safety due to increased construction trucks on the roads, potential traffic accidents during equipment's and poles transportation to the site, increased construction trucks in the area, improperly

		placed or stored materials, unprotected work sites and potential electrical faults from electrical lines. Waste left on site can also be a health and safety hazard to the communities. The influx of workers, goods, and services to a project area can have negative social consequences for the local community. Risks can be minimized by restricting access to the construction sites, having proper signage, creating community awareness on the risks and developing other appropriate mitigation measures based on additional identified risks.
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	To avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives.	The rehabilitation or upgrade of distribution lines will most likely be limited to the existing footprint of the line, so it is unlikely to cause the partial loss or modifications of assets along the ROW. The interventions are expected to have minimal and temporary land impact. However, the project might find that the existing ROW has been encroached on by structures and economic activities, which may result in resettlement or loss of assets. In case of partial loss or modification of assets along the RoW, please refer to the RPF on preparation and implementation of either a RAP or LRP.
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	To protect and conserve biodiversity and habitats.	[For rehabilitation of distribution lines, which is within the existing RoW, this Standard is not expected to be applicable. Analyze if the path of the distribution line will impact on non-critical natural habitats. The following text can be adapted if the works impact non-critical habitats. If this is not the case, the standard can be considered non-relevant.] Works may affect modified and natural habitats such as forests and wetlands, albeit such areas should be avoided as much as possible, including avoiding clearing in riparian areas and avoiding use of machinery in the vicinity of watercourses. The DL designs in such areas should consider using the longest possible line spans to avoid or minimize the

		footprint impact; use of insulated conductors and/or using horizontal alignment of conductors to minimize electrocution risk to birds and bats. Where avoidance is not possible, ESS6 guides impact management.
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities. This ESS applies whenever Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities (as they may be referred to in the national context) are present in, or have collective attachment to a proposed project area, as determined during the environmental and social assessment.	To improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with the Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities affected by a project throughout the project's life cycle.	[Analyze if the path of the distribution line will impact indigenous peoples. If so, the following text can be adapted. If this is not the case, the standard can be considered non-relevant]. This standard is relevant if the distribution line may impact indigenous communities. Where applicable, these activities will be guided by an IPP to be developed during implementation following the guidance of the IPPF being prepared. The IPP will include measures to mitigate any potential project impacts on IPs. The project SEP ensures that Indigenous communities are appropriately informed in an inclusive and culturally appropriate manner.
ESS 8: Cultural Heritage	To protect cultural heritage from the adverse impacts of project activities and support its preservation.	This standard is considered relevant because of construction and excavation related activities which may encounter chance finds. A Chance Finds Procedure prepared as part of the Project ESMF will be used. [Investigation must be undertaken to determine whether there is some basis for the possible presence of tangible or intangible cultural heritage, with specific reference to the sub-project under consideration]. Sub-project screening excluded activities that could directly impact cultural heritage.
ESS 10: Stakeholder Engagement and Information Disclosure.	To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship	This standard applies to all projects funded by the Bank. A separate Stakeholder Engagement Plan (SEP) will developed, disclosed, and consulted on. The SEP will identify and map the relevant stakeholders including beneficiaries and project

	with them, in particular project-affected parties. To provide project-affected parties with accessible and inclusive means to raise issues and grievances, and allow Borrowers to respond to and manage such grievances	affected people, and discuss the actions and consultation plans for each group. In addition, the SEP will establish a complaints and grievance redress mechanism (GRM) for stakeholders.
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5. Environmental and Social Baseline

This section highlights observed findings along the Distribution Lines' Rights of Way (ROW) during environmental and social assessment visits.

[Develop sub-sections describing the project location, land use/economic activities, vegetation/fauna, wetlands & river crossings, settlement patterns, encroachment of the ROW, and access to energy provider facilities. This should be done for individual distribution lines or preferably for groups of similar sites with an explanation of the grouping carried out].

[Insert pictures of the ROW to illustrate settlement patterns, encroachment, wetlands and river crossings, vegetation impinging on the ROW, and any salient characteristics that could impact the distribution line].

6. ASSESSMENT OF POTENTIAL IMPACTS AND MITIGATION MEASURES

6.1 Evaluation of Environmental and Social Impacts

[The likely impacts will be predicted and their significance assessed based on the interaction between the biophysical and socioeconomic environments of the Project and the characteristics of the environment receiving the impact. With the use of qualitative and quantitative data from the literature review, consultations, expert knowledge, and field visits to the proposed Project and similar project sites, the significance of the potential impacts are classified in Table 2. Please consider summarizing the results of the sub-project screening process here, and the summary of impact assessment methodology].

The following section further discusses the identified significant impacts and recommends measures to improve the positive impacts whilst the negative impacts are addressed using the mitigation hierarchy from prevention, reduction, restoration, and compensation.

Table 2: Evaluation of Significance of Potential Environmental and Social Impacts

Parameter	Potential Impact	Significance	
		During Works	During Operation
Physical			
Soils			
Generation of waste			
Electric and magnetic fields			
Hazardous materials management			
Biological			
Forest & vegetation			

clearance			
Community and Occupational Health and Safety			
Community Health and Safety			
Occupational Health and Safety			
Labor influx and/or impacts on Public Services			
Socioeconomic			
Stakeholder Engagement			
Labor risks, child/forced labor, labor discrimination, etc.			
Gender Based Violence			
Land Acquisition and involuntary resettlement, Land Use and Livelihoods			
Indigenous Peoples			

6.2 Potential Environmental and Social Impacts with Corresponding Mitigation Measures

[Available mitigation measures in the ESHGs especially the sector specific ones should be utilized to the extent possible ... notably 'Environmental, Health, and Safety Guidelines for Electric Power Transmission and Distribution Guidelines'. These EHS guidelines are also useful in determining impacts. Please ensure that negative impacts are evaluated in two steps: without and with mitigation measures. Both results should be reported.]

6.1.2 Potential Negative Impacts

Negative impacts of upgrade and operation of distribution lines are described with corresponding mitigation measures. *[The content of each session is not exhaustive. Please correct or add information on the different kinds of impacts].*

6.1.2.1 Negative Impacts on the Physical Environment

This section discusses the most significant potential impacts to environmental resources including soils, water resources, ambient noise levels and ambient air quality. Generally, potential environmental impacts are expected to occur during the construction phase of the project although negligible to minor impacts may also be associated with operations.

a: Negative Impacts on Soils

Soil disturbance during excavation for the poles may result or contribute to soil erosion, particularly in areas prone to wind or water erosion. Soil disturbing activities may increase risks of erosion particularly in regions where the prevailing soil types have high erosion potential. Soils may be accidentally or intentionally become contaminated by the improper management of wastes and other materials during project construction. Furthermore, derelict distribution infrastructure or those in good condition but not used for whatever reason pose a risk to the public and environment. No significant impact to soil is anticipated post construction.

Mitigation measures

In areas with uneven topography, such as gullies, a foundation should be constructed, and the relocation of poles to more even ground should be considered for sustainability and safety. ..The land around new poles should be leveled to reduce the risk of erosion

b: Generation of waste

Upgrading of the distribution line may result in generation of waste arising from site clearance and operations, packaging materials, residual materials, etc. Generated wastes may range from solid wastes including food wastes, cardboard, plastic, metal, glass, paper, organic and hazardous wastes such as creosote to treat wooden poles, pesticides to clear right of way, used oil and filters from vehicles, transformer oil, etc. Liquid waste will include black water and grey water generated on-site by construction workers.

Mitigation measures

- Follow the mitigation hierarchy by avoiding generation of waste through product substitution, minimizing generation of waste by buying just enough materials to be used and ensuring efficiency.
- All waste generated should be segregated and disposing it off according to waste types and characteristics to an approved landfill by a licensed vendor in line with national requirements.
- Workers should be trained and sensitize workers on waste management to ensure good housekeeping practices and general waste handling. .(In particular hazardous waste handling and management).
- Provide workers with appropriate PPE for handling the various waste streams generated by the subproject.
- The contractor to develop a hazardous waste tracking and documentation system/mechanisms to ensure that the hazardous waste is disposed by a licensed vendor to an approved facility/landfill per the national laws.
- Collect and transfer recyclable waste to recycling facilities. This includes metal, paper, plastic, wood.
- Organic waste shall be disposed of at the municipal landfill of the project area.
- Put an impervious layer below the pole stacks so that the creosote is prevented from infiltrating to the soil.

- All excess materials produced during construction or maintenance should be collected and disposed of appropriately with these procedures specified in contracts. Old or unused lines must be safely decommissioned and removed according to safety guidelines.
- Require Contractors to develop and implement a waste management plan to manage different waste streams (Plastics, hazardous, Bio-degradable and non-biodegradable) in accordance with The National Environment/Waste Management Regulations.
- Recommendations specific to the use of pesticides include: Train personnel to apply pesticides and ensure that personnel have received the necessary certifications, or equivalent training where such certifications are not required; Respect post-treatment intervals to avoid operator exposure during re-entry to crops with residues of pesticides; Ensure hygiene practices are followed (in accordance to FAO and PMP) to avoid exposure of family members to pesticides residues; in line with the ESHS guidelines and ESS-3.

d: Hazardous Materials Management

Hazardous materials in this sector include insulating oils / gases (e.g. Polychlorinated Biphenyls [PCB] and sulfur hexafluoride [SF6]), and fuels, in addition to chemicals or products for wood preservation for poles and associated wood construction material.

Mitigation measures

Replacing existing transformers and other electrical equipment containing PCB, and ensuring appropriate storage, decontamination, and disposal of contaminated units; Prior to final disposal, retired transformers and equipment containing PCB should be stored on a concrete pad with curbs sufficient to contain the liquid contents of these containers should they be spilled or leaked. The storage area should also have a roof to prevent precipitation from collecting in the storage area. Disposal should involve facilities capable of safely transporting and disposing of hazardous waste containing PCB; Surrounding soil exposed to PCB leakage from equipment should be assessed, and appropriate removal and / or remediation measures should be implemented.

Hazard communication and training programs to prepare workers to recognize and respond to workplace chemical hazards. Programs should include aspects of hazard identification, safe operating and materials handling procedures, safe work practices, basic emergency procedures, and special hazards unique to their jobs.

e: **Wood Preservatives:** The majority of wooden utility poles are treated with pesticide preservatives to protect against insects, bacteria, and fungi, and to prevent rot. The preservatives most commonly used for power poles are oil-based pesticides such as creosote, pentachlorophenol (PCP), and chromated copper arsenate (CCA). Use of these preservatives is being limited in some countries due to their toxic effects on the environment. While in use, poles may leach preservatives into soils and groundwater, however, levels are highest directly beside poles and decrease to within normal levels at approximately 30 centimeters (cm) distance from the pole. The most significant potential environmental impacts occur at specialized wood treatment facilities if not managed appropriately.

Mitigation measures

Poles should be pretreated at an appropriate facility to ensure chemical fixation and prevent leaching, and to impede the formation of surface residues at the right-of-way. Consider use of alternative preservatives (e.g. copper azote). Undertake appropriate disposal of used poles. Landfill facilities should be capable of handling wastes that may have chemical leaching properties. Disposal through incineration or through recycling should consider associated air emissions and secondary product residues of preservative chemicals. Evaluate the cost and benefit of using alternative pole materials (e.g. steel, concrete, and fiberglass).

6.1.2.2 Negative Impacts on the Biological Environment

a: Negative Impacts on Forests and Vegetation

The rehabilitation and maintenance of distribution line rights-of way, especially those aligned through forested areas, may result in increased risk of forest fires and visual and auditory disturbance due to the presence of machinery, construction workers, electric poles, and associated equipment.

Mitigation measures

As much as possible consideration shall be given to alternative design and pole location to avoid trees. Overall, where there is need to prune or fell trees this should be done in consultation with the owner/community. If there is need for a new tree to be planted, the relevant authorities such as the [insert name of relevant authority] shall be consulted in the identification of species and siting of replacement trees. Installation of distribution lines above existing vegetation to avoid land clearing and undertake Revegetation of disturbed areas with native plant species.

6.1.2.3 Occupational and Community Health and Safety

a: Negative Impacts on Community Health and Safety

During distribution line rehabilitation works the public is at risk of accidents from the equipment, vehicles, improperly placed or stored materials, and unprotected work sites. Since heavy-duty equipment and vehicles may have to work and traverse the road during construction, the safety of other road users could be jeopardized. Construction traffic, particularly heavy vehicles such as low beds and loaded trucks, are also expected to contribute to increased road traffic. Waste left on site can also be a health and safety hazard to the communities.

Although the footprint of distribution line upgrade activities is small and temporary, the influx of workers, goods, and services to a project area can have negative social consequences for the local community. There could be an increase in the risk of transmission of sexual diseases with the migration of workers into the communities who will have purchasing power and can use that power to influence persons to engage in unsafe sexual practices. This can include the spread of HIV/AIDS and other sexually transmitted infections. Women may experience harassment, fear of violence, and other threats when using roadways, especially after dark. Non-local workers could also lead to bad relations, particularly between the male workers when the females are shown increased attention that is unwanted. Interpersonal relationships with married persons could lead to the breakup of families

thereby disrupting the community dynamic. There could also be cases of unwanted pregnancies particularly affecting the younger women of the community. The abuse of alcohol and other drugs can be detrimental to the community, especially to vulnerable groups when introduced and encouraged by non-local workers. In addition, the presence of a non-local construction crew to the area can create security fears among local residents.

The operation of live power distribution lines and substations may generate the following industry-specific community health and safety impacts: Electrocution, and Electromagnetic interference.

*Mitigation measures [For additional guidance please refer to Good Practice Note: **Assessing and Managing the Risks of Adverse Impacts on Communities from Project-Related Labor Influx**]*

It is essential to clear all sites after the fixing of poles and the derelict poles recycled. Access to the sites during works must also be restricted to avoid accidents and theft incidents. Safety signs, symbols and barriers will be used at sensitive work locations. Public traffic will have to be re-routed or stopped during the stringing of conductors across road sections. Contractors will have to put temporary structures in place that will allow safe passage of public vehicles at reduced speeds. Contractors will have to prepare and implement a Traffic Management Plan (TMP) to address risks related to the use of the road by the public during stringing of conductors across roads. The TMP is expected to include the use of advance warning signs, erection of barriers, provision of lighting, provision of safe traffic diversions, etc. The TMP should detail mitigation measure to address the risks associated with accidents or incidents, road congestion and increased traffic, as well as potential blockages that may arise during the transportation of project equipment. Grounding conducting objects (e.g. fences or other metallic structures) installed near power lines, to prevent shock. Contractors will be required prepare and implement a Code of Conduct for construction workers which will include measures relating to SH/SEA, and to monitor the behavior of workers.

The project will also need a Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) Action Plan, as well as workers' codes of conduct with SEA/SH provisions, contractual provisions for contractors and subcontractors, a grievance mechanism sensitive to SEA/SH issues, among other measures.

Recommended techniques to prevent electrocution hazards include Use of signs, barriers (e.g. locks on doors, use of gates, education / public outreach to prevent public contact with potentially dangerous Equipment.

b: Occupational Health and Safety

Health and safety are a key concern at any construction site. Workers are usually exposed to situations which can result in serious accidents, some of which can be fatal, if established guidelines and practices are not properly communicated or complied with by workers and supervised/enforced accordingly. Risks can result from the improper use of construction methods, machines and equipment or accidents on the work sites. The health and safety of workers are therefore major concerns during the construction period. While training and monitoring should be conducted and can reduce the risk of any serious incidents, accidents can still occur. Risks may include accidents during site preparations, transporting and offloading of construction materials, improper use of equipment, slip or trip while traversing the

work sites, falls while working at heights etc. In such cases, these exposures can result in physical injuries such as cuts, bruises, loss of limbs or can even be fatal.

The following are therefore possible health and safety risks which are likely to be encountered at the construction site:

- Electrocution risk from live power lines.
- Working at height.
- Exposure to chemicals such as PCBs, pesticides, herbicides, creosote, etc.
- Electric and magnetic fields.
- Injuries or death from vehicular collisions.
- Injuries from slips, trips and falls.
- Injuries from falling onto unprotected excavations and other open trenches or areas.
- Ill health caused by insect bites/stings from hostile fauna.
- Injuries or death caused by snake bites.
- Injuries or ill health caused by heat-related illnesses such as sunburn, heat stress, heat exhaustion or heat stroke as a result of working under extremely hot conditions.

Mitigation measures

- Undertake pre-employment medical examination for workers to establish pre-existing conditions, to accordingly guide job and task allocation to workers.
- Only allowing trained and certified workers to install, maintain, or repair electrical equipment;
- Deactivating and properly grounding live power distribution lines before work is performed on, or in close proximity, to the lines;
- Workers not directly associated with power distribution activities who are operating around power lines should adhere to local legislation, standards, and guidelines relating to minimum approach distances for excavations, tools, vehicles, pruning, and other activities;
- Provide workers with welfare amenities such as clean drinking water, rest shades, gender segregated toilets, first aid services.
- Maintain good housekeeping practices to minimize trips and falls.
- Minimum hot stick distances may only be reduced provided that the distance remaining is greater than the distance between the energized part and a grounded surface;
- **Working at height on poles and structures:** Workers may be exposed to occupational hazards when working at elevation during construction, maintenance, and operation activities. Prevention and control measures for working at height include:
 - Testing structures for integrity prior to undertaking work;
 - Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers, among others;

- Installation of fixtures on pole components to facilitate the use of fall protection systems;
 - Provision of an adequate work-positioning device system for workers. Connectors on positioning systems should be compatible with the pole components to which they are attached;
 - Hoisting equipment should be properly rated and maintained and hoist operators properly trained;
 - Safety belts should be of not less than 16 millimetres (mm) (5/8 inch) two-in-one nylon or material of equivalent strength. Rope safety belts should be replaced before signs of aging or fraying of fibres become evident;
 - When operating power tools at height, workers should use a second (backup) safety strap;
 - Signs and other obstructions should be removed from poles or structures prior to undertaking work;
 - An approved tool bag should be used for raising or lowering tools or materials to workers on structures.
- The contractors will be required to prepare a plan to address Occupation Health and Safety, which is expected to address induction and training of workers, conduct of toolbox sessions, provision of personal protective equipment, provision of first aid kits, etc.

6.1.2.4 Negative Impacts on the Socio-economic Environment

a: Gender Based Violence (GBV)

The project can negative impacts on vulnerable groups and women. The presence of non-local project workers during the construction could have a negative impact on these groups if not properly managed. The construction workforce for the project could represent a SEA/SH risk if the correct mitigation measures are not in place and if there is no proper supervision during the construction works.

Mitigation measures

SEA/SH Action Plan is prepared for the project and will be implemented. The contractors will be required to prepare and implement a Code of Conduct for construction workers which will include measures relating to SH/SEA, and to monitor the behavior of workers (please refer to the ESMF). Locals will be encouraged to report any such behavior or incidents through specific measures included in the project GRM for SH/SEA.

b: Inadequate stakeholder engagement and potential exclusion of vulnerable groups

In cases of inadequate stakeholder engagement, vulnerable groups can be underrepresented or excluded in project related engagements and planning, as well as in employment by the contractors. When employed, women may be offered lower compensation than their male counterparts.

Mitigation measures

Stakeholder engagement will include women and other vulnerable groups and measures to engaged with these groups are outlined in the SEP. Feedback from these groups will be taken into consideration in the project design and implementation. The project GRM will also make special provisions for addressing grievances from vulnerable groups. Employment of women, where possible, will be encouraged, with fair compensation. Measures will be considered in the design of the roads to cater for these groups, including provisions for pedestrians and bicycles, lighting, road markings, signs, etc.

c: Impact on Public Services

Short-term, localized road traffic interruption will be experienced during the process of material transportation, fixing poles and line stringing due to long and heavy parts. Temporary loss of electricity supply shall occur to existing customers during works (particularly at the line commencement and termination points) and all customers after the Project during maintenance. Location of poles in flood and erosion prone areas may lead to unstable or collapse of poles and lines that will affect or cut transmission.

Mitigation measures

Traffic during works must be controlled to reduce disturbance and risks, and avoid peak times / days such as busy market days, for example. Customers will be given notice before disconnecting electricity supply for works and maintenance. Gullies and flood prone areas shall be avoided as much as possible and where technically impossible; the more durable design of foundations will be applied with routine monitoring and maintenance.

d: Land Acquisition, Land Use and Livelihoods

[Identify impacts of land acquisition, land use, and economic resettlement based on the nature of works, the existing Right of Way (ROW) if any and/or need to create a ROW].

Mitigation measures

A Resettlement Policy Framework has been drafted during project preparation to guide the elaboration and implementation of a Resettlement Action Plan (RAP) or Livelihoods Restoration Plan (LRP). A RAP or LRP as applicable will need to be prepared to guide the compensation process for impacts such as project-related land acquisition or restrictions on land use that may cause physical displacement (such as relocation, loss of residential land or loss of shelter), economic displacement (like loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both.

e. Indigenous peoples

[If relevant, include an analysis of potential impacts of the construction of distribution lines to indigenous peoples.]

Mitigation measures

Project activities impacting indigenous communities will be guided by the [Project's Indigenous Peoples Policy Framework (IPPF) and the site works specific Indigenous Peoples Plan (IPP)] which will need to be prepared in a participatory way with the indigenous communities in the project area, and disclosed prior to the beginning of works. The mitigation measures are specified in the IPPF/IPP.

7. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The identified critical impacts of distribution lines and proposed mitigation measures under Section 6 above are extracted into Table 3 for ease of implementation. Please complete Section 6.2 and adapt it to your Distribution Line subproject, as appropriate, and accordingly complete the Mitigation Tables Template provided below. **[To be adopted as appropriate to each subproject]**

Table 3: Environmental and Social Risks and Mitigation Measures

Environmental and Social Risks and Mitigation Measures during Planning and Designing Stage

Key Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline	Budget (USD)
Identify the location and salient E&S aspects to influence the design.	1. Location of DL in ecosystem areas and over settlements. 2. Structural safety risk; 3. Functional layout and engineering control.	➤ Mainstream identified E&S aspects into the project design and avoid forest and wetland areas as much as possible.	PIU Design Engineer Local Authorities	During development of design & stakeholder Consultations	xxx
Identify the needs for temporary construction, such as workshops, laydown areas, working corridors along the RoW, workers' accommodation, temporary access roads, etc.	Location of supporting facilities in environmentally and socially sensitive areas.	➤ Identify sites in consultation with the local authorities. ➤ Secure the required statutory approvals, where applicable.	PIU Design Engineer Local Authorities	During design and Prior to commencement of construction	xxx
Identify the needs for securing RoW and	Displacement of economic and land-	➤ Secure the RoW in line with ESS5 requirements.	PIU Design Engineer	During development of	xxx

existing land-uses (e.g. crops, kiosks, etc)	uses without due compensation.	➤ Compensate for the existing land-uses or secure consent as appropriate.	Local Authorities	design & stakeholder Consultations	
Identify needs for workforce and type of project workers	Employment of under-age.	➤ Identify numbers and types of workers ➤ Consider accommodation and measures to minimize cross infection	PIU Design Engineer Local Authorities	During development of design & stakeholder Consultations	xxx
Identify needs for using security personnel during construction.	Use of security forces	Develop a security management plan.	PIU Design Engineer Local Authorities	During development of design & stakeholder Consultations	xxx

Environmental and Social Risks and Mitigation Measures during Construction Stage

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
Clearing of vegetation and trees, Construction activities including Pole erection and replacement. - <i>Impacts on Physical Environment.</i>	- <u>Impacts on Soil</u>	- Sites around new poles must be immediately levelled and cleared of excess materials. - Avoid close proximity to flood prone areas or large gullies which are prone to flooding. - Design appropriate protective measures such as deeper footings, extra reinforcement at base or around the poles etc. where flood prone areas are unavoidable. - All excess materials and waste produced during construction or	[Select an appropriate monitoring entity. i.e. supervision firm, PIU, public utility company, Contractor, etc]	Prior to, and during construction of the DL infrastructure

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		maintenance must be collected for proper disposal. - In areas with uneven topography, such as gullies, a foundation should be constructed, and the relocation of poles to more even ground should be considered for sustainability and safety.		
	- <u>Waste Management</u> - <u>[Please consider providing information on offsite facilities that manage the various kinds of waste (hazardous and non-hazardous) that will be generated during all sub-project phases. This should include the entire life cycle of offsite waste management, from transport</u>	- Follow the mitigation hierarchy by avoiding generation of waste through product substitution, minimizing generation of waste by buying just enough materials to be used and ensuring efficiency. - All waste generated should be segregated and disposing it off according to waste types and characteristics to an approved landfill by a licensed vendor in line with national requirements. - - Workers should be trained and sensitized on waste management to ensure good housekeeping practices and general waste handling. (In particular hazardous waste handling and management). - Provide workers with appropriate	[Select an appropriate monitoring entity. i.e. supervision firm, PIU, public utility company, Contractor, etc]	During construction of the DL infrastructure

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
	<u>from the site to recycling facilities or to certified landfills. If such facilities do not exist within economical distance from the various sites along the ROW, environmentally sound alternative waste management must be proposed].</u>	PPE for handling the various waste streams generated by the subproject. - Collect and transfer recyclable waste to recycling facilities. This includes metal, paper, plastic, wood. - Engage registered waste management companies to handle hazardous waste. - Organic waste shall be disposed of at the municipal landfill of the project area. - Put an impervious layer below the pole stacks so that the creosote is prevented from infiltrating to the soil. - Require Contractors to develop and implement a waste management plan to manage different waste streams (Plastics, hazardous, Bio-degradable and non-biodegradable) in accordance with The National Environment/Waste Management Regulations. - The contractor to develop a hazardous waste tracking and documentation system/mechanisms to ensure that the hazardous waste is disposed		

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		by a licensed vendor to an approved facility/landfill per the national laws. - Recommendations specific to the use of pesticides include: Train personnel to apply pesticides and ensure that personnel have received the necessary certifications, or equivalent training where such certifications are not required; Respect post-treatment intervals to avoid operator exposure during re-entry to crops with residues of pesticides; Ensure hygiene practices are followed (in accordance to FAO and PMP) to avoid exposure of family members to pesticides residues; in line with the ESHS guidelines and ESS-3.		
	- <u>Hazardous Materials Management</u>	- Replacing existing transformers and other electrical equipment containing PCB, and ensuring appropriate storage, decontamination, and disposal of contaminated units. - Prior to final disposal, retired transformers and equipment containing PCB should be stored on a concrete pad with curbs sufficient to	[Select an appropriate monitoring entity. i.e. supervision firm, PIU, public utility company, Contractor, etc]	During construction of the DL infrastructure

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		contain the liquid contents of these containers should they be spilled or leaked. - The storage area should also have a roof to prevent precipitation from collecting in the storage area. - Disposal should involve facilities capable of safely transporting and disposing of hazardous waste containing PCB. - Surrounding soil exposed to PCB leakage from equipment should be assessed, and appropriate removal and / or remediation measures should be implemented. - Hazard communication and training programs to prepare workers to recognize and respond to workplace chemical hazards. Programs should include aspects of hazard identification, safe operating and materials handling procedures, safe work practices, basic emergency procedures, and special hazards unique to their jobs.		
	- <u>Leaching and soil contamination from Wood</u>	- Poles should be pretreated at an appropriate facility to ensure chemical fixation and prevent leaching, and to impede the	[Select an appropriate monitoring entity. i.e. supervision	During construction of the DL infrastructure

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
	<u>Preservatives used to treat Poles.</u>	formation of surface residues at the right-of-way. - Evaluating the cost and benefit of using alternative pole materials (e.g. steel, concrete, and fiberglass). - Consider use of alternative preservatives (e.g. copper azote); Undertake appropriate disposal of used poles. - Landfill facilities should be capable of handling wastes that may have chemical leaching properties.	firm, PIU, public utility company, Contractor, etc]	
Handling or storage of transformers at project sites.	- Spillage of hazardous chemicals	- Transformers will be temporarily stored on saw dust or sand before installation. - The saw dust/sand at the transformer storage site will be checked weekly for leakages and removed as and when stains are noticed. - Any Waste transformer oil will be adequately collected and transferred by a registered waste transporter to a registered hazardous landfill/facility for treatment and disposal. - Any spills or leakages will be excavated by a licensed waste handler with due attention to relevant environmental, health and safety requirements to avoid worker		

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		exposure. - All major vehicle repairs shall be conducted by qualified and experienced personnel at designated service centers (garages) away from the project site.		
Clearing of vegetation and trees, Construction activities including Pole erection and replacement - <i>Impacts on the Biological Environment</i>	- <u>Impacts on Landscapes</u>	- Limit vegetation clearance to work areas only. - Use only certified sand, gravel, and wood suppliers to be included in contracts.	Design Engineer Contractors [Select monitoring entity. i.e. supervision firm, PIU, public utility company]	Prior to, and during construction of the DL infrastructure
	- Impacts on natural habitats, ecological resources and biodiversity <u>including Forests and Vegetation</u>	- As much as possible consideration shall be given to alternative design and pole location to avoid trees. - Overall, where there is need to prune or fell trees this should be done in consultation with the owner/community. - If there is need for a new tree to be planted, the relevant authorities such as the [insert name of relevant authority] shall be consulted in the identification of species and siting of replacement trees.	[Select an appropriate monitoring entity. i.e. supervision firm, PIU, public utility company, Contractor, etc]	Prior to, and during construction of the DL infrastructure

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		- Installation of distribution lines above existing vegetation to avoid land clearing. - Revegetation of disturbed areas with native plant species. - Removal of invasive plant species during routine vegetation maintenance.		
Clearing of vegetation and trees, Construction activities including Pole erection and replacement - <i>Impacts on Socio-economic environment.</i>	- <u>Community Health and Safety</u>	- Stringing across roads and high ways shall be conducted in hours with less traffic on weekends. - Inform affected communities prior to carrying out dusty and noisy activities to get to safer locations. - Clear all waste and excess materials immediately after pole erection and clear derelict poles. - Use well-kept heavy vehicles and equipment to reduce exhaust emissions. - Regular toolbox talks should be conducted for drivers and include issues related to traffic management in addition to enforcing speed limits of up to 20 kph within the project areas. - Store material away from easy public access.	[Select an appropriate monitoring entity. i.e. supervision firm, PIU, public utility company, Contractor, etc]	Prior to, and during construction of the DL infrastructure

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		- Segregate and restrict work site from public access and use safety signage and symbols. - Extra care must be taken to ensure safety of children in the nearby schools along the corridors. In addition, ensure safety of persons around premises close to where lines and poles will be located. - Public traffic will have to be re-routed or stopped during the stringing of conductors across road sections. Alternatively, Contractors will have to put temporary structures in place that will allow safe passage of public vehicles at reduced speeds, with guidance of traffic marshals on both approaches. - Grounding conducting objects (e.g. fences or other metallic structures) installed near power lines, to prevent shock. - Extensive public consultation during the planning of power line and power line right-of-way locations. - Setting up and operationalizing Community Grievance Redress Mechanism and Committees at both Local and National Level.		

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		- Accurate assessment of changes in property values due to power line proximity. - Put in place Emergency Response Plan, Measures and Procedures, popularized to the public and workers to handle project related incidents and accidents. - Develop and implement as part of Contractor's ESMP (CESMP) a Security Management Plan guided by security risk assessment (where Security Personnel are used), undertaking due diligence background check on conduct of personnel deployed, ensuring their regular training on code of conduct and use of proportionate force when handling riots (in line with ESS4). - Recommended techniques to prevent electrocution hazards include: Use of signs, barriers (e.g. locks on doors, use of gates, education / public outreach to prevent public contact with potentially dangerous Equipment.		
	- <u>Gender Based Violence</u> /SEA/SH	- SEA/SH Action Plan is prepared for the project and will be implemented. - The contractors will be required to	[Select an appropriate monitoring entity.	During construction of the Distribution Line infrastructure

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		prepare and implement a Code of Conduct for construction workers which will include measures relating to SH/SEA, and to monitor the behavior of workers. - Locals will be sensitized and encouraged to report any such behavior or incidents through specific measures included in the project GRM for SH/SEA. - Educate workers on risks and prevention of sexually transmitted infections. - Use local labor as much as possible. - Sensitize workers on appropriate behavior as part of induction and ensure the Code of Conduct is signed by all workers.	i.e. supervision firm, PIU, public utility company, Contractor, etc]	
	- <u>Inadequate stakeholder engagement and exclusion of vulnerable groups</u>	- Include women and other vulnerable groups in all stakeholder engagement. - Take into consideration the feedback from these groups in the project design and implementation including incorporating the concerns during development of the ESMP. - Design GRM to make special provisions for addressing grievances from vulnerable groups.	[Select an appropriate monitoring entity. i.e. supervision firm, PIU, public utility company, Contractor, etc]	Prior to, and during construction of the Distribution Line infrastructure

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		- Encourage employment of women, where possible with fair compensation.		
	- <u>Occupational Health and Safety</u>	- Undertake pre-employment medical examination for workers to establish pre-existing conditions, to accordingly guide job and task allocation to workers. - Provide training, risk information, and appropriate manual handling machinery. - Develop and use standard operating procedures to avoid electrocution, through use of method statements, accompanied by Permit to Work System, including use of Log-Out-Tag-Out (LOTO) when stringing and testing the distribution lines. - Only allowing trained and certified workers to install, maintain, or repair electrical equipment. - Deactivating and properly grounding live power distribution lines before work is performed on, or in close proximity, to the lines; - Ensuring that live-wire work is conducted by trained workers with strict adherence to specific safety and insulation standards. Qualified	[Select an appropriate monitoring entity. i.e. supervision firm, PIU, public utility company, Contractor, etc]	Prior to, and during construction of the Distribution Line infrastructure

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		or trained employees working on distribution systems should be able to achieve the following: ○ Distinguish live parts from other parts of the electrical system. ○ Determine the voltage of live parts. ○ Understand the minimum approach distances outlined for specific live line voltages. ○ Ensure proper use of special safety equipment and procedures when working near or on exposed energized parts of an electrical system. - Workers should not approach an exposed energized or conductive part even if properly trained unless: ○ The worker is properly insulated from the energized part with gloves or other approved insulation; or, ○ The energized part is properly insulated from the		

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		worker and any other conductive object; or, ○ The worker is properly isolated and insulated from any other conductive object (live-line work). - Workers not directly associated with power distribution activities who are operating around power lines should adhere to local legislation, standards, and guidelines relating to minimum approach distances for excavations, tools, vehicles, pruning, and other activities. - Minimum hot stick distances may only be reduced provided that the distance remaining is greater than the distance between the energized part and a grounded surface. - The contractors will be required to prepare a plan to address Occupation Health and Safety, which is expected to address induction and training of workers, conduct of tool box sessions, provision of personal protective equipment, provision of first aid kits, etc.		

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		- Institutes emergency response procedures to handle any emergency incidents. - Incident/accident reporting through keeping log of incidents/accidents and remedial actions (in the event of an accident). - Provide personal protective equipment and first aid kits. - Setting up Workers' Grievance Redress Committees to handle and process workers' complaints in line with the project ESMF. - Providing workers with Contracts, with clear Terms of Employment and working conditions in accordance with the National Employment and Labour Laws. - Provide workers with gender segregated sanitation facilities (mobile toilets), with maintained hygiene. - Provide workers with welfare amenities such as clean drinking water, rest shades, first aid services. - Maintain good housekeeping practices to minimize trips and falls.		

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		-		
	Working at height on poles and structures: Workers may be exposed to occupational hazards when working at elevation during construction, maintenance, and operation activities.	- <i>Prevention and control measures for working at height include:</i> - Testing structures for integrity prior to undertaking work. - Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers, among others. - To reduce slips and falls, workers who are to climb the wooden pole will have climbing boots fitted with hooks to enable them anchor to the pole. - Establishment of criteria for use of 100 percent fall protection (typically when working over 2 meters above the working surface, but sometimes extended to 7 meters, depending on the activity). The fall protection system should be appropriate for the pole structure and necessary movements, including ascent, descent, and moving from point to point.	[Select an appropriate monitoring entity. i.e. supervision firm, PIU, public utility company, Contractor, etc]	During construction of the Distribution Line infrastructure

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		- Installation of fixtures on pole components to facilitate the use of fall protection systems. - Provision of an adequate work-positioning device system for workers. Connectors on positioning systems should be compatible with the pole components to which they are attached. - Hoisting equipment should be properly rated and maintained and hoist operators properly trained. - Safety belts should be of not less than 16 millimetres (mm) (5/8 inch) two-in-one nylon or material of equivalent strength. Rope safety belts should be replaced before signs of aging or fraying of fibres become evident. - When operating power tools at height, workers should use a second (backup) safety strap. - Signs and other obstructions should be removed from poles or structures prior to undertaking work. - An approved tool bag should be used for raising or lowering tools or materials to workers on structures.		

Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
	- <u>Impacts on Public Social Services and Utilities</u>	- Control road traffic. - Avoid peak times and days such as market days. - Inform customers before supply disconnection for work. - Locate and design structures to avoid flood and erosion prone areas that may cause destruction and disturb supply.	[Select an appropriate monitoring entity. i.e. supervision firm, PIU, public utility company, Contractor, etc]	Prior to, and during construction of the Distribution Line infrastructure
	- <u>Land Acquisition, Land Use and Livelihoods</u>	- [List mitigation measures set out by RPF/RAP/LRP]	[Select an appropriate monitoring entity. i.e. supervision firm, PIU, public utility company, Contractor, etc]	Prior to, and during construction of the Distribution Line infrastructure
	- <u>Impacts on Indigenous Peoples</u>	[List mitigation measures set out by IPPF/IPP]	[Select an appropriate monitoring entity. i.e. supervision firm, PIU, public utility company, Contractor, etc]	Prior to, and during construction of distribution lines

Environmental and Social Risks and Mitigation Measures during Operation Stage

Activity	Potential Negative Impacts	Mitigation Measures	Responsibility for Mitigation	Responsibility for Monitoring	Timeframe	Budget
OPERATION PHASE OF DISTRIBUTION NETWORK						
Distribution	Increased noise	- Replace bare cables with	Public utility	[Select monitoring	During	xxx

Line operation	nuisance from lines	insulated ones. - Regular maintenance of distribution line infrastructure - Avoid overloading - Maintain minimum heights and ROW	engineers to coordinate these activities	entity. i.e. supervision firm, PIU, public utility company]	Operation Phase and as part of O&M ESMP.	
	Community Health and Safety Risks	- Regular maintenance of lines to avoid sparks. - Routine pruning of trees particularly before rainy seasons after seeking permission of owners. - Prevent public access to transformers. - Removal of disused poles and cables from communities. Old poles cleared for the appropriate management (reuse / recycle / dispose at approved sites)	Public utility engineers to coordinate these activities	[Select monitoring entity. i.e. supervision firm, PIU, public utility company]	During Operation Phase and as part of O&M ESMP.	xxx
	Occupational Health and Safety Risks	- Provide training and risk information. - Provide personal protective equipment and first aid kits. - Develop and use standard operating procedures to avoid electrocution during	Public utility Contractors	[Select monitoring entity. i.e. supervision firm, PIU, public utility company]	During Operation Phase and as part of O&M ESMP.	xxx

		maintenance.				
	Disturbance of farms during maintenance [if works cross farmlands]	- Avoid farming periods if possible - Seek consent of farmers - Remove all waste after maintenance works.	Public utility Contractors	[Select monitoring entity. i.e. supervision firm, PIU, public utility company]	During Operation Phase and as part of O&M ESMP.	xxx
	Bird strikes on lines	- Use design and specification for better insulation and protection.	Public utility	[Select monitoring entity. i.e. supervision firm, PIU, public utility company]	During Operation Phase and as part of O&M ESMP.	xxx

8. CONSULTATIONS AND PUBLIC PARTICIPATION

10.1 Objectives of The Stakeholder Consultations

It is important that affected communities are given the opportunity to participate in the environmental and assessment process, particularly in the provision of information specific to the sites. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. Specifically, the Project Stakeholder Engagement Plan (SEP) seeks to:

- To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, in particular project-host and/or affected parties;
- To assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance;
- To promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle on issues that could potentially affect them; and
- To ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format.

The project will need to implement site-specific measures guided by the provisions in the SEP.

10.2 Summary of Issues During the Stakeholder Consultations

[Include a summary of the stakeholder engagement process carried out for the specific works at hand. This should include a brief analysis of project-affected parties, other interested parties, and vulnerable groups engaged, the efforts and instances of engagement, the project environmental and social aspects discussed, the questions and concerns expressed by stakeholders, and the feedback absorbed by project design].

[Include a table summarizing the comments and concerns raised during consultations with stakeholders. Remember to blur the first two columns (*containing personal information*) in the disclosure version of the ESMP in line with WB Policy on information disclosure]

Table 5: Summary of Comments received from stakeholders consulted

Name	Designation & Contact Information	Location	Comments and concerns/issues	Response and proposed mitigation measure to address raised issues

11. IMPLEMENTATION AND MONITORING ARRANGEMENTS FOR THIS ESMP

11.1 Implementation Arrangements, Roles and Responsibilities

[This section describes the institutional arrangements to implement the ESMP in relation to the assessment and identification of mitigation measures for subprojects, review, clearance and disclosure of the ESMP, carrying out the mitigation and monitoring measures, (for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting and staff training). A clear delineation of responsibilities must be spelled out under this section. This should consider and describe functions and roles encompassing planning and design, and construction stage, an institutional arrangement for the authorities, project proponent, consultants, contractors and supervision engineers. For suggestions in relation to this, see the institutional arrangements provided in the project ESMF, and adapt accordingly. The text below can serve as a guide].

The Project Implementation Unit (PIU) under [fill in the name of the Ministry of Public Works authority housing the PIU] is responsible for the overall implementation of the Project and its ESMP. The E&S Specialists/Unit/Department [use whichever is applicable] will ensure the respective roles of each party are carried out on time. The PIU will ensure that the environmental and social requirements as detailed in the ESMP are part of the bidding and contract negotiation phase and part of the works contracts. The [include the names of the ministries, public utility companies, or institutions with oversight capacities], with their oversight responsibilities, shall liaise with the [Ministry or Public Utility company], housing the PIU, to ensure the Project is in line with legal requirements.

[Include mention of the national and local laws and regulations on Environmental and Social Impact Assessment (ESIA) and the stated arrangements and obligations set out to monitor, supervise and audit the ESMP implementation].

The table below summarizes the roles and responsibilities regarding the implementation arrangements for **environmental and social management**. [Complete table below and adapt as relevant for project].

Table 6: Implementation Arrangements – [template]

Level/ Responsible Party	Roles and Responsibilities
World Bank	• Carry out bi-annual supervision missions; • •
National/ Regional, PIU and Government Authorities	• Undertake site inspections and monitoring • Report serious Incidents to the Bank within 48 hrs of occurrence. • •

<i>Supervision Engineer</i>	• <i>Carry out E&S oversight role over the Contractor</i> • <i>Prepare and submit E&S compliance reports to PIU,</i> • <i>Review and approve the CESMP</i> • <i>Report serious incidents to the PIU within 24 hrs of occurrence.</i>
<i>Contractors</i>	• <i>Develop the C-ESMP/MSIP,</i> • <i>Hire E&S staff to implement CESMP,</i> • <i>Provide documentation and regular progress reports</i> • <i>.....</i> • <i>.....</i> • <i>....</i>

11.2 Institutional Training and Sensitization

The implementation of the distribution line infrastructure shall include additional training of relevant PIU/Public utility staff, stationed in the various Regions, in environmental and social due diligence during construction and implementation. In addition, Contractors shall include in their work plans and carry out training of workers on the required E&S risk management measures they are expected to implement as part of the daily activities.

During implementation, the PIU in conjunction with the Supervision Engineer, will undertake E&S performance assessment of the Contractor and service providers and develop tailor made E&S training plan and sensitization. Before commencement of implementation, E&S start up training of Contractor's workers shall be undertaken by the PIU and the Supervision Engineer.

At the bare minimum, the following topics shall be covered during workers' training:

- Stakeholder mapping and engagement.
- Specific aspects of environmental and social assessment and monitoring of the ESMP implementation.
- Occupational health and safety.
- Community Health and Safety.
- Codes of conduct for project workers.
- Traffic Management Plan.
- Waste Management.
- Emergency preparedness and response.
- Gender mainstreaming in construction works.
- Combatting, and monitoring of HIV/AIDS.
- Combat pandemic diseases such as COVID 19.
- Contractor and Operator management on environment and social risks.
- Grievances management implementation and monitoring.
- Land acquisition and resettlement.
- Gender-based violence/Sexual Exploitation and Abuse (SEA).
- Labor and Working Conditions, including employer compliance with national labor laws, and combatting of child labor and forced/trafficked labor.
- Resettlement and Livelihood Restoration.
- Undertaking Incidents Reporting, Root Cause Analysis and Corrective Action Plans.

Note: Only those applicable to some of the participants

11.3 Monitoring of the ESMP

[Describe monitoring arrangements for environmental and social impacts as set out in national legislation and regulations, and implementation arrangements specific to the project. Institutions in charge of monitoring can include supervision firms, the PIU, national EIA authority, amongst other.]

Table 7: ESMP Monitoring Program [this is an example]

Institution	Monitoring activity	Timeline	Recommended frequency	Requirements	Proposed budget (USD)
Supervision Engineer (EHSO, SDO)	Monitoring and evaluation of measures implemented by contractors	Whole Project Duration, especially during pole erection and line stringing	Daily	Logistics for monitoring field work	\$XX,XXX
PIU	Monitoring and evaluation of measures set out by ESMP	Whole Project Duration, especially during pole erection and line stringing	Monthly	Logistics for monitoring field work	\$XX,XXX
				TOTAL	\$XX,XXX

The Environmental and social monitoring activities shall be based on direct or indirect indicators of complaints, noise, Ground measures, laboratory tests, emissions, effluents, and resource use, as applicable to the project.

The responsibility for environmental and social monitoring will largely lie with the PIU the Supervision Engineer and the Contractor. The involvement of other stakeholders in monitoring compliance of the project with other aspects is not much anticipated due to short term nature of the construction phase of the distribution line projects.

Some of the key monitoring indicators of focus will include the following amongst others:

- Indicators of emissions, effluents, and resource use applicable to the particular project. Monitoring should be conducted by trained individuals following monitoring and record-keeping procedures and using properly calibrated and maintained equipment;
- Accident and Fatality Rates: Projects should try to reduce the number of accidents among project workers (whether directly employed or subcontracted) to a rate of zero, especially accidents that could result in lost work time, different levels of disability, or even fatalities;
- Facilities should also maintain a record of occupational accidents and diseases and dangerous occurrences and accidents;

- d) Traffic control measures put in place during construction phase of the project;
- e) Number of trees planted;
- f) Number of sensitization meetings held for the community on aspects of the project etc.;
- and
- g) Safety aspects on the project i.e. provision of PPEs for the workers, OSH trainings, Toolbox meetings,

During the construction period, the monitoring activities will focus on ensuring that environmental and social mitigation measures are implemented, and some performance indicators will be monitored to record environmental and social performance and to guide any remedial action to address unexpected impacts.

Proposed monitoring plan to be carried out during the implementation of the project to ensure contractors' compliance with the mitigation measures given in **Section 6 and Section 7** along with the monitoring indicators and frequency. The contractor will carry out the monitoring. The Monitoring **Table xxx below** will also be included in the contract specifications of the Bidding Documents.

[Please populate and complete the Monitoring Table below, as applicable to your subproject]

Environmental and Social Monitoring Parameters

S.No	Monitoring Parameter/ Activity	Means of Monitoring	Compliance Indicator/ threshold limits	Freq	Responsible Agency	
					Implementation	Supervision
1.	Air quality	Visual inspection of equipment/vehicle exhausts and records of vehicle maintenance.	All equipment and vehicles shall be maintained as per manufacturers recommendations.	Monthly	Contractor	RE, PIU
2.	Noise and vibration	Visual inspection of noise control measures.	Controls measures shall be in place for high noise generating equipment.	Monthly	Contractor	RE, PIU
3.	Wastewater discharges	Visual inspection of wastewater discharges.	All wastewater shall be directed to the airport's sewerage facility.	Monthly	Contractor	RE, PIU
4.	Waste management	Waste management as per the approved plan.	Facilities are clean, and waste collection and disposal facilities are in place.	Monthly	Contractor	RE, PIU
5.	Cleanliness at worksites and Residences	Visual inspections	Worksites shall be clean with out rubbish.	Monthly	Contractor	RE, PIU
6.	Water and sanitation facilities at workers' residences	Visual inspections and interviews	Availability of safe drinking water and sanitation facilities, and adequate kitchen supplies.	Monthly	Contractor	RE, PIU
7.	Water and sanitation facilities at worksites	Visual inspections and interviews	Availability of safe drinking water and sanitation facilities.	Monthly	Contractor	RE, PIU
8.	Controls for workplace hazards	Visual inspection to ensure controls for workplace hazards are in	Implementation of Control Measures specified in the Job Hazard Analysis Reports.	Monthly	Contractor	RE, PIU

S.No	Monitoring Parameter/ Activity	Means of Monitoring	Compliance Indicator/ threshold limits	Freq	Responsible Agency	
					Implementation	Supervision
		place.				
9.	Workers are trained on ESHS Risks and Code of Conduct	Inspection of training records and interviews with the workers	100 percent of workers are to be trained	Monthly	Contractor	RE, PIU
10.	Work at heights	Visual inspections and documents reviews	Method statement and permit to work in place. Use of safety harness, etc	Monthly	Contractor	RE, PIU
11.	Hydrocarbon and chemical storage and handling	Visual Inspection of storage facilities	No leakages from the containers in the storage. Handling follows procedures to avoid spillages.	Monthly	Contractor	RE, PIU
12.	Emergency Response Mechanism	Visual inspection	Fire extinguishers are in place at all work sites. Emergency routes are displayed.	Monthly	Contractor	RE, PIU
13.	Restoration of Work Sites	Visual inspection	The facilities are clean with no waste at the works sites	Monthly	Contractor	RE, PIU
14.	Traffic safety	Visual inspection for traffic management	The smooth flowing of traffic; and placement of traffic signs and flag-person	Monthly	Contractor	RE, PIU
15.	First Aid Kits at worksites and residences	Visual inspection and interviews	All worksites and worker's residences shall have adequate first aid kits	Monthly	Contractor	RE, PIU
16.	Grievances from labour	Records of grievances registered and resolved.	All grievances shall be addressed with 15 days of complaint.	Monthly	Contractor	RE, PIU
17.	Licensed equipment operators and vehicle drivers	Visual inspection of driving licenses	All operators and drivers shall have valid licenses	Monthly	Contractor	RE, PIU
18.	Use of PPE by staff	Visual inspection on use	100 percent use of PPE	Monthly	Contractor	RE, PIU

S.No	Monitoring Parameter/ Activity	Means of Monitoring	Compliance Indicator/ threshold limits	Freq	Responsible Agency	
					Implementation	Supervision
		of relevant PPEs				

11.4 Reporting

Effective communication between contractors, the engineering supervision firm, the PIU, and the Environmental Authority is essential. Monthly reporting of monitoring and evaluation results from the contractors and supervision firm to the PIU is recommended. The PIU will report to the EIA Authority in accordance with national legislation and regulations.

If the *[responsible party in the implementing agency]* becomes aware of a serious incident in connection with the project, which may have significant adverse effects on the environment, the affected communities, the public, or workers, it should notify the World Bank within 48 hours of becoming aware of such incident. A fatality is automatically classified as a serious incident, as are incidents of forced or child labor, abuses of community members by project workers (including gender-based violence incidents), violent community protests, or kidnappings, lost time injury requiring 3 or more days off work, occurrence of a disease in excess of normal expectancy of number of cases, displacement without due process of compensation, unexpected impacts on heritage resources, unexpected impacts on biodiversity resources, environmental pollution incident, cases of sexual exploitation and abuse (SEA), sexual harassment (SH), and any other incident or accident that may have a significant adverse effect on the environment, the affected communities, the public, or the workers, irrespective of whether harm had occurred on that occasion. The incidents reporting, root-cause-analysis and correction action plan forms shall be developed by the PIU and reviewed by the World Bank Task Team to align with both the National reporting requirements with the World Bank Environmental and Social Reporting Tool (ESIRT) Templates. Provide sufficient details regarding the scope, severity, and possible causes of the incident or accident, indicating immediate measures taken or that are planned to be taken to address it, and any information provided by any contractor and/or supervising firm, as appropriate. Subsequently, at the World Bank's request, prepare a report on the incident or accident and propose measures to address it and prevent its recurrence.

11.5 Environmental Auditing

Environmental and social auditing will be carried out periodically during implementation (based on each Country Statutory requirement) and after the completion of project activities.

The E&S project completion Audit will be undertaken at least three months to the end of the implementation contract. The minor and moderate shortfalls can be implemented before the end of the Contract, and any substantial deviations shall be rolled into and implemented within the Defects Liability Period (DLP).

11.6 ESMP Implementation Budget

Table 8: ESMP Implementation Budget [Adopt and complete the Budget Table below]

S.No.	Cost Item/ Activity	Unit Cost (USD)	Quantity	Total (USD)
	E&S Supervision and Monitoring by PIU (At-least Once per Month).	xx	xx	xx
	Periodic (Annual) Environmental and Social Audit.	xx	xx	xx

	Project Completion Audit (Post Project Implementation)			xx
	E&S Office Equipment (Laptops), E&S Monitoring Equipment (Air-Quality, Noise Meter, Insitu-Water Quality, GPS, Vehicle.	xx	xx	xx
				
	etc.....			
	TOTAL Budget			

ANNEXES:

Please refer to the following Annexes contained in the ESMP Template for Construction of Distribution Lines. These Annexes also apply to the Rehabilitation/Upgrade of Distribution Lines in Non-Sensitive Locations:

Annex 1 Complete Table of Risks and Mitigation Measures

Annex 2: Waste Management Plan (WMP)

Annex 3: Occupational Health and Safety Plan (OHSP)

Annex 4: Sexual Exploitation and Abuse/ Sexual Harassment (SEA/SH) Action Plan

[Once Disclosed, please insert web link to the ESMP Template for Construction of Distribution Lines]