DRAFT ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

Regional Distributed Access Through Renewable Energy Solutions – Sierra Leone (P507938)

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ACCRONYMS AND ABBREVIATIONS

AP	Affected Person
CEO	Chief Executive Officer
CBOS	Community-Based Organizations
CLOs	Community Liaison Officer
CP	Child Protection
CPF	Country Partnership Framework
CESMP	Contractor's Environmental and Social Management Plan
DARES	Distributed Access to Renewable Energy Solutions
DRE	Distributed Renewable Energy
DVD	Digital Video Disks
EMF	Electromagnetic field
EAP	Energy Access Project
EDSA	Electricity Distribution and Supply Agency
EPA -SL	Environmental Protection Agency - Sierra Leone
EPC	Engineering, Procurement, and Construction
EPML	Environmental Protection and Management Law
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESHS	Environmental, Social, Health, and Safety
ESIA	Environmental and Social Impact Assessment
ESIRT	Environmental and social incident response toolkit
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMU	Environmental and Social Management Unit
ESMS	Environmental and Social Management System
E&S	Environmental and Social
ESS	Environmental and Social Standard
GHG	Greenhouse Gas Gases
GBV	Gender Based Violence
GM	Grievance Mechanism
GMIS	Grievance Mechanism Information System
GRC	Grievance Redress Committees
HCs	Hydrocarbons
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
HSE	Health and Safety, and Environment
ISO	Organization for Standardization
IUCN	International Union for Conservation of Nature
IVA	Independent Verification Agent

LMP	Labor Management Procedure
LRP	Livelihood Restoration Plans
MFDP	Ministry of Finance and Development Planning
MDAs	Ministries, Departments, and Agencies
MGCA	Ministry of Gender and Children's Affairs
MOE	Ministry of Energy
MOH	Ministry of Health
MPOX	Monkeypox
NEOHP	The National Environmental and Occupational Health Policy
NGO	Non-Governmental Organization
NOx	Nitrogen oxides
NPHIL	National Public Health Institute of Sierra Leone
OHS	Operational Health and Safety
PCMU	Project Coordination and Management Unit
PDO	Project Development Objective
PIU	Project Implementation Unit
PM	Particulate matter
POM	Project Operational Manual
PPE	Personal Protective Equipment
PUE	Productive use
RAP	Resettlement Action Plan
RP	Resettlement Plan
RCRC	Rechargeable Battery Corporation
RFM	The Regional Fund Manager
RP	Resettlement Plan
RPF	Resettlement Policy Framework
RF	Resettlement Framework
RCU	Regional Coordination Unit
SEAH/SH	Gender Based Violence (GBV) and Sexual Exploitation, Abuse, and Sexual Harassment.
SEP	Stakeholder Engagement Plan
SHS	Solar Homes System
Sox	Sulfur oxides
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention on Desertification
UNEP	United Nations Environment Program
UNFCCC	United Nations Convention on Climate Change
USAID	United States Agency for International Development
VAC	Violence against Children
VLD	Voluntary Land Donation
VOC	Volatile organic compound
WB	World Bank
WCMC	World Conservation Monitoring Center
WHO	World Health Organization

WMP	Waste Management Plan

Executive Summary

DARES Project Background – Project Components and PDO

The Distributed Access to Renewable Energy Solutions (DARES) project is envisioned as a regional platform to enable scaling up of both new and established cross-country market aggregation approaches to accelerate Distributed Renewable Energy (DRE) market growth across countries in West Africa for achieving universal electrification. The program focuses on accelerating DRE market growth in the three most critical areas: (i) households and commercial and industrial (C&I) customers, (ii) productive use (PUE) DRE solutions for enhanced food security (including irrigation, cooling, and agri-processing), (iii) critical human capital-related public services (incl. rural health centers and schools). A fourth area focuses on aligning policies and regulatory frameworks and building capacities in the countries (EDSAs, regulators, etc.). The regional platform aims to provide – (i) electricity access to 8 million and 100,000 micro, small and medium enterprises through the deployment of mini-grids, mesh-grids and standalone systems; (ii) reliable and clean electricity for productive uses to around 200,000 farmers and agri-businesses; and (iii) electricity access to 5,000 public institutions, including health centers and schools, to enable them to provide essential public services. The first phase of this Regional Program includes four countries: Benin, the Central African Republic, Liberia, and Sierra Leone. The second phase is likely to incorporate the Republic of Chad, the Republic of Guinea, and other countries.

Project Components

The DARES involves the construction of solar plants, associated mini-grids, installation of solar panels for residents and industries, and these are spread across the following components for phase 1 IDA allocation:

Component 1 (US$300 million; of which 150 million from the private sector): **Connecting People** - Affordable DRE solutions, including mini-grids, mesh-grid, and standalone systems, to foster local development.

Component 2 (US$1.6 million; of which 6,6 million from the private sector): **Powering Economic Transformation -** Food Security through DRE-based irrigation, cooling, and agri-processing solutions to build resilience of food supply chains in West Africa.

Component 3 (US$ 33,4 million; of which 23,4 million from the private sector): **Energy as a Service -** Powering Human Capital through the roll-out of the "Energy-as-a-Service" (EaaS) model to strengthen critical public infrastructure (incl. health centers and schools).

Component 4 (US$ 40 million IDA Funds): **Implementation support, technical assistance, and capacity building - F**ocused on enabling environment as well as regional tender design and capacity building of national Rural Electrification Agencies and Sector Regulators.

The country allocation for the Republic of Sierra Leone is US$60 million. Other countries' allocations are as follows: The Republic of Benin, US$40 million; the Central African Republic, US$55 million; the Republic of Guinea, US$65 million; the Republic of Liberia, US$45 million; and US$120 million for the Republic of Chad.

The Project Development Objective (PDO) is to increase access to electricity services for households and MSMEs with private sector-led distributed renewable energy generation. PDO level indicators include:

a. Households provided with access to electricity (number);

b. Productive use connections energized (number);

c. Public institutions (schools and healthcare facilities) provided with access to electricity (number).

Objectives of the Environmental and Social Management Framework (ESMF)

This ESMF is an environmental and social assessment and management tool for all DARES components. The Technical Assistance investment is not included in the ESMF analysis because that investments do not have or contain activities that may have impact in the biophysical or socioeconomic environment. This document shall provide guidance for satisfactory assessment and management of environmental and social impacts at the sub-project level through appropriate measures during the planning, design, construction, and operation phases of various investments. The ESMF will provide guidelines for assessing the environmental, socio-economic, and health impacts of the project, as well as recommending appropriate mitigation measures and monitoring plans in line with the applicable Environmental and Social Standards (ESS).

Legal Framework

The DARES project will be implemented under the legal framework of national and international laws, including the World Bank ESS and guidelines, international conventions signed by beneficiary countries, and national laws of the respective project countries.

The Environment Protection Act, 2023 the key legal instrument of reference for environmental management of all sectors, including energy, in Sierra Leone. The Environmental Protection Agency (EPA) is the principal authority in Sierra Leone for the management of the environment and coordinates, monitors, supervises, and consults with relevant stakeholders on all activities in the protection of the environment and sustainable use of natural resources. In addition to being responsible for the provision of guidelines for the preparation of Environmental and Social Impact Assessment (ESIA) studies, environmental audits, as well as the evaluation and issuance of environmental permits, the EPA is mandated to set environmental quality standards and ensure compliance with pollution control. The main functions of the EPA are as follows:

- Co-ordinate, integrate, harmonize, and monitor the implementation of environmental policy and decisions of the Policy Council by the Line Ministries;
- Propose environmental policies and strategies to the Policy Council and ensure the integration of environmental concerns in overall national planning;
- Collect, analyze, and prepare basic scientific data and other information pertaining to pollution, degradation, and environmental quality, resource use, and other environmental protection and conservation matters, and undertake research and prepare and disseminate every two years a report on the state of the environment in Sierra Leone ;
- Encourage the use of appropriate, environmentally sound technologies and renewable sources of energy and natural resources.

- Establish environmental criteria, guidelines, specifications, and standards for production processes and the sustainable use of natural resources for the health and welfare of the present generation, and to prevent environmental degradation for the welfare of future generations.

Eight out of the ten Environmental and Social Standards (ESSs) of the World Bank's Environmental and Social Framework (ESF) have been screened as relevant and applicable to DARES Sierra Leone. These standards include:

Environmental and Social Standard (ESS)	**Relevance**
ESS1: Assessment and Management of Environmental Risk and Impacts	Applicable
ESS2: Labor and Working Conditions	Applicable
ESS3: Resource Efficiency and Pollution Prevention and Management	Applicable
ESS4: Community Health and Safety	Applicable
ESS5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	Applicable
ESS6: Biodiversity Conservation and Management of Natural Resources	Applicable
ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Applicable
ESS8: Cultural Heritage	Applicable
ESS9: Financial Intermediaries	Not Applicable
ESS10: Stakeholder Engagement and Information Disclosure	Applicable

Project Environmental and Social Baseline

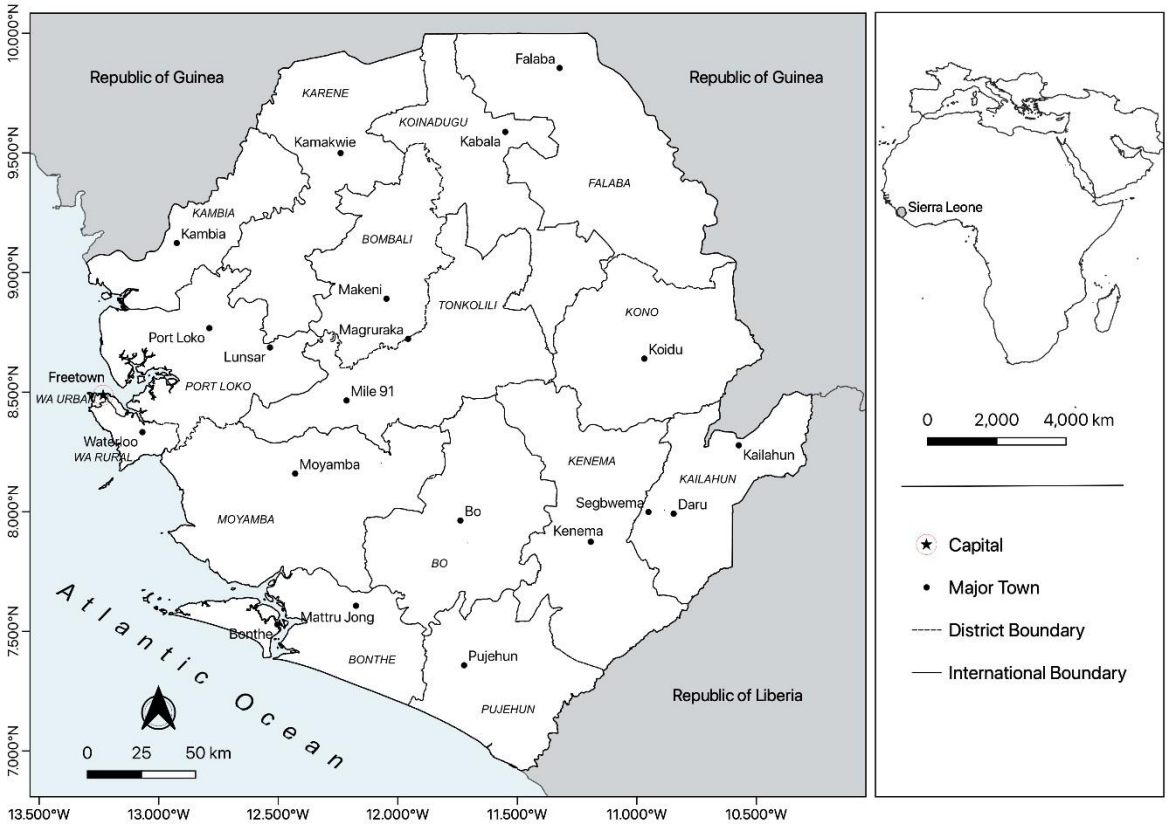
The DARES will have nationwide coverage. In this regard, a general overview of the environmental and social coverage includes;

- Climate
- Hydrology and water quality
- Soil Characteristics
- Vegetation and forests
- Fauna
- Protected areas
- Status of used batteries, solar panels, and associated electronic devices
- Demography
- Ethnic groups
- Religion
- Human Capital
- Poverty and growth

- Sources of livelihood
- Land ownership and access
- Access to basic services
- Access to electricity
- Conflict and Fragility

It is expected that the eventual and more elaborate environmental and social assessment studies to be undertaken will provide in detail the specific and peculiar environmental and social baseline conditions for each project site. Thus, the project area of influence (which cuts across Sierra Leone) is divided into three main climatic regions: Coastal plains, Tropical Rain Forest, and Savannah

Map of Sierra Leone Showing Districts



Project Environmental and Social Risks and Impacts

Project environmental and social risks have both been rated as substantial in the Project Appraisal Document (PAD). The rationale for the rating is the nature and scope of program activities, the environmental and social sensitivities of targeted beneficiary areas and communities, the local context, and borrower capacity to manage the environmental and social risks of project activities. While the project has nationwide coverage, the majority of the project's targeted population is expected to be electricity-deprived communities living in rural and remote areas, which may include zones of fragility due to insecurity, pervasive poverty, and heightened vulnerability to climate change.

The DARES project will cover all of Sierra Leone's five (5) administrative Regions, namely, the Northern, Eastern, Southern, North-Western Provinces, the Western Area, and their 16 respective Districts. The E&S risks identified are systemic and expected to manifest frequently across project

components. However, they are not expected to be large-scale and irreversible. Their magnitude is proportional to the small size of subprojects, which are limited in scope, site-specific, and manageable. But if not managed properly, the risks could induce adverse E&S impacts in the short term, medium term, and long term. Environmental and social risks and adverse impacts for each project component may include, but are not limited to:

- Noise generated during the movement and transportation of equipment (construction phase, likewise operational phase, when providing services, and during supervision);
- Waste generation, construction waste and (electronic and hazardous – operational phase);
- Stress on local water use and supply, (used for construction and cleaning of solar panels, but also for irrigation schemes) that could exert pressure on community water sources, sourcing of construction materials (sand, stones, aggregates, steel rods and timber) from unvetted suppliers, construction impacts (including community and occupational health and safety), and waste management. All of these can become systemic risks if not managed well
- Air pollution from contractors' equipment mobilization to the site;
- Traffic/road safety hazards for workers and the community (construction and operational phase);
- Travel delays (construction phase with interruption of regular traffic);
- Risk of poor OHS practices: Accidents may result in injury and fatalities, working from height at the rooftop of buildings (Solar home system installation) may also bring an occupational hazard for solar installation and general construction impacts. (Construction phase);
- Grievances, Complaints, Disruption of activities, and Vandalism: Grievances from stakeholders, including PAPs, of the different participating countries within the program area of influence. (Construction and operational phase);
- Labor Influx: Sexual Exploitation and Abuse and Sexual Harassment (SEA-SH) due to the migration of workers required for the construction, installation, and/or sale operations to be supported by the project. This risk may be exacerbated in rural and peri-urban settings. Another potential risk is the possibility of conflicts arising between migrant workers and local communities due to cultural differences or a lack of mutual respect, or competition for employment/services. Competition between workforces may induce conflicts. (Construction and operational phase);
- Gender Based Violence (GBV)/SH/SEA: Overall, during the different project operations, women and girls may be exposed to sexual harassment, exploitation, abuse, and violence because of interactions with the different categories of project workers;
- Illicit behavior, such as theft, substance abuse, and use of drugs (construction and operational phase);
- Community Health and Safety (e.g., respiratory diseases from dust, STIs, accidents);
- Land acquisition and involuntary resettlement and/or economic displacement, and land use changes; possible voluntary land donation;[1]
- Weak labor practices among DRE companies installing and managing the solar systems, such as possible use of child or forced labor, or inadequate occupational health and safety (OHS) practices is another risk.

[1] Voluntary Land Donation (VLD) is open to abuse and coercion; as such, it should not be encouraged on this project except in instances where the donation meets the requirements set out in the VLD guidelines in Annex 15.10.

- Social exclusion, due to affordability factors and / or social priorities within communities; also, exclusion from important job positions, listed last to receive project services.
- Though the project will privilege voluntary willing buyer-willing seller transactions, minor to moderate land acquisition (Without involuntary resettlement or economic displacement), needed for instance to build access roads, could still be required, generating potential involuntary resettlement and/or economic displacement, and land use changes, and possible voluntary land donation, which will need to follow ESS5.
- The medium-term risks associated with the unsafe handling and disposal of lead-acid batteries and lithium batteries used in mini grids and solar home systems will pose a health hazard to people and the environment and bring the project's sustainability into question. Such risk could contribute to cumulative impacts stemming from toxic waste of batteries in multiple renewable energy (RE) projects, which is the direction of energy generation and access across the region. A lack of adequate hazardous waste management policy, regulation and infrastructure in Sierra Leone aggravates this issue of used batteries and electronics.
- Risk of fire by thermal runaway from manufacturing errors, inaccurate installation, etc.
- The core issue with OHS is the long-term implications of the increased number of energy storage units (containing batteries). This impact requires national-level strategic environmental and social assessment (SESA), policy, strategy, and an action plan for the handling and disposal of batteries, e-waste, and hazardous waste.

Mitigation Measures

The mitigation measures proposed in this ESMF are intended to reduce or eliminate, to the extent possible, potential adverse environmental and social impacts of project activities. The environmental and social risks and potential impacts identified are manageable; they are expected to be temporary, site-specific, and limited in scope. It should be noted that the mitigation measures referred to are generic, implying that they will only require action once specific projects are identified and assessed. The identified risks will be managed and mitigated through the application and use of the ESMF and other project instruments, including the Labor Management Procedure (LMP), the SEP, the ESIAs, the Environmental and Social Management Plan (ESMP), and other instruments as will be determined by a screening process. The ESMF incorporates an overall environmental and social management process for the project and the proposed subprojects. The process involves steps and activities for each country to carry out the appropriate environmental and social risk assessment proportionate to the nature and scale of impact of the specific activities. For significant impacts, an environmental and social impact assessment (ESIA) will be done in line with the objectives of the ESMF, along with an Environmental and Social Management Plan (ESMP) for the mitigation of the potential negative risks and impacts and for monitoring compliance with the relevant ESSs of the ESF during project implementation. For moderate E&S risks, only an ESMP will be required, for which templates have been annexed to this ESMF, see Annexes 15.5 and 15.9.

ESMF Implementation and Monitoring Plan

The Project Implementation Unit (PIU) of the Electricity Distribution and Supply Agency (EDSA) at the Ministry of Energy (MOE), will be the implementing agency of this ESMF and other relevant Institutions.

The PIU is to:

i. Ensure proper and timely implementation of environmental and social interventions proposed in this ESMF and other relevant documents to be prepared based upon the ESMF, such as the ESIA/ESMP;

ii. Alert project authorities by providing timely information about the success or otherwise of the environmental and social management process outlined in this ESMF in such a manner that appropriate decisions can be made to improve upon the process or avert any adverse impact;

iii. Make a final evaluation to determine whether the mitigation measures incorporated in the technical designs and the ESIA, the ESMP, the LMP, the SEP and the GBV plan have been successful in such a way that the pre-project environmental and social condition has been restored, improved upon, or is worse than before, and to determine what further mitigation measures may be required;

iv. Ensure the enforcement of all environmental legislation;

v. Ensure the minimization of the impacts of physical development on the ecosystem;

vi. Ensure the preservation, conservation, and restoration of all ecological processes essential for the preservation of biological diversity;

vii. Ensure the protection of air, water, land, forest, and wildlife within the country;

viii. Ensure pollution control and environmental health in each country, including the e-waste management plans for the country;

ix. Ensure the monitoring compliance with Operational and Community Health and Safety plans and measures;

x. Conduct and supervise, as relevant, inclusive and participatory stakeholder engagement;

xi. Monitor overall national-level grievances' management and documentation;

xii. Ensure project monitoring and liaison with the Independent Verification Agency (IVA);

xiii. Operationalize SEA/SH (GBV) action plan, follow referral protocols, and report all cases;

xiv. Ensure the reporting of all incidents and accidents as per Environmental and Social Commitment Plan (ESCP), and following the environmental and social incident response toolkit (ESIRT) procedure;

xv. Ensure compliance of the government concerning the ESCP agreement;

xvi. Report all relevant matters to the Bank, including compliance with ESCP, incidents and accidents, recruitment and staffing of E&S personnel at the PIU, training of personnel, contractors, developers, and the community on E&S risk management.

Environmental and Social Risk Management Process

The ESMF incorporates an overall environmental and social management process for the DARES project and proposed subprojects. It takes into account the E&S assessment of all activities related to the project (e.g., supply chains, associated infrastructure) and their potential effects on human health, ecosystems, and communities far from the direct project site. A key implication is the need to assess cumulative impacts, for example, an investment's renewable energy-supported new water use might be insignificant on its own, but when combined with existing water scarcity in some of the participating countries' dry regions, the total impact could be severe. The process involves steps and activities for the Borrower and DRE companies to carry out ESIAs of project activities in line with the objectives of the ESMF and develop environmental and social management plans as needed. The ESMF also includes guidelines for the mitigation of the potential negative risks and impacts and for monitoring compliance with the relevant ESSs.

The environmental and social risk management approach for the project is tailored to its national scope and organizational structure. The process begins with stakeholder engagement at the national level and capacity building for companies interested in providing renewable energy services. This effort will be led by the PIU, with support from the RCU (Regional Coordination Unit). During project implementation, sub-projects will be screened to identify environmental and social risks and adverse impacts in order to develop appropriate mitigation measures in line with national environmental regulations and ESS requirements. The purpose of screening is to: (i) determine whether activities are likely to have potential negative environmental and social risks and impacts; and (ii) identify appropriate mitigation measures. For activities with adverse risks or impacts, the mitigation measures are then incorporated into the implementation of the activity, e.g., through appropriate environmental and social management plans, the implementation of which is monitored and reported.

The DRE companies will conduct and document the environmental and social screenings as part of their prospecting activities. Those screenings and the ESIAs shall be approved by the PIU before contract negotiations begin. The PIU is responsible for verifying, among others, that adequate stakeholder engagement has occurred, including the management of grievances, and that national law and market-compliant willing-buyer willing-seller agreements have been signed if relevant.

The DRE companies' eligibility conditions will incorporate E&S criteria, some of which will be met prior to contract signature, and others will be prepared and implemented during contract execution, for instance, the LMP, Operational Health and Safety Conditions, and construction-specific ESMPs. The RFM (Regional Fund Manager) will ensure that the environmental and social conditions are met or included, as relevant, in the draft agreement and will recommend that PIU enter into the grant agreement with the company. Such an agreement will include an annex specifying the E&S requirements that the company or consortium must fulfill. Before any grants are disbursed, the Independent Verification Agency (IVA) will verify that all environmental and social eligibility conditions outlined in the grant agreement and the Project Operation Manual (POM) are satisfied.

The PIUs will be responsible for regular supervision of activities at the national level. The IVA will also collect and monitor reports on the implementation of environmental and social risk management measures. The PIU will all be staffed with at least one environmental and social specialist, as well as one gender-SEA/SH-stakeholder engagement level at the national level.

Moreover, the PIU will provide overall direction and have primary responsibility for E&S due diligence, the implementation of E&S instruments, and the monitoring and enforcement of compliance. Specific arrangements and responsibilities for each component are as follows:

- Under **Component 1**, the PIU will establish operating guidelines[2] and specific construction requirements for site and developer selection, which include E&S aspects. Competent private sector mini grid developers who apply for grants to support their activities for the identification,[3] development, construction, and operation of mini grids across the country will have to indicate in their respective proposals how they intend to address E&S sustainability issues that could be associated with these activities. These selected companies will be responsible for putting in place environmental and social safeguards instruments satisfactory to EDSA, for implementing the E&S risk identification and management measures on the ground, to ensure subproject compliance with applicable E&S requirements as stated above.

- Under **Component 2**, the PIU will establish company selection criteria and compliance clauses in the grant agreement, both of which will include E&S requirements. Qualified companies will install units of rooftop solar per the grant agreement and will be required to have an ESIA that will focus on key risks for this component (labor issues, battery/ waste management, and OHS issues).

Institutional Arrangements for ESMF Implementation

A successful implementation of an ESMF depends on the commitment and capacity of the PIU, associated institutions, and the private sector to apply or use the ESMF effectively. The project will leverage existing PIUs implementing DRE-related projects with project preparation until the RCU, and subsequently, country PIUs are set up. The PIU, in collaboration with the EPA and the key stakeholders, will carry out the:

- Enforcement of all environmental and social legislation in Sierra Leone
- Obtain all relevant permits required by the project;
- Verify that the willing buyer and willing seller agreements are legally formalized;
- Minimize the impacts of physical development on the ecosystem;

[2] *There are two processes for E&S risk management for this component. One covers the minimum subsidy tender, and the second covers the performance-based grant process for mini grid developers. Conceptually, these processes are very similar (with the difference in timing of certain steps) and thus are presented here as one.*

[3] *The PIU's involvement will primarily be through the identification of demand for electrification in a range of communities for the minimum subsidy tender, but the actual mini grid sites within these communities will be identified by private sector developers. For the performance-based grants, private sector developers will select both the community and the exact location of the proposed mini-grids within those communities.*

- Preservation, social cohesion, conservation, and restoration of adverse impact on all ecological processes are essential for the preservation of biological diversity;
- Protection of air, water, land, forest, and wildlife within the county;
- Pollution control and environmental health in the county.

The PIU/Electricity Distribution and Supply Agency (EDSA) E&S Team will verify the E&S screening carried out by the DRE companies and confirm the nature and magnitude of sub-projects' potential environmental and social risks and impacts. The E&S team will categorize risks and impacts of each subproject screened by the DRE companies and will be responsible for determining their risk rating in accordance with risk classification guidelines provided in ESS1. The PIU E&S Team will also be responsible for supervising the contractor during implementation of the sub-projects and ensuring that the contractor's ESMPs are correctly implemented in line with the Sierra Leone Environment Protection Act,2022, and applicable World Bank Environmental and Social Standards, and the World Bank Group Environmental Health and Safety Guidelines for electric power transmission and distribution.

The PIU's E&S Team will prepare and submit to the World Bank regular monitoring reports on the environmental, social, health, and safety (ESHS) performance of the Project, including, but not limited to, incidents or accidents, stakeholder engagement activities, and a Grievance Mechanism (GM). The report shall also incorporate the status of the implementation of ESMPs and other relevant E&S documents, including the SEP, the LMP, and the ESCP. These reporting requirements will also be included as part of the project Operation Manual and in relevant contracts.

Consultations and Stakeholder Engagement

Stakeholder consultations and engagement are sequenced in a three-stage process designed to progressively expand participation consistent with the evolution of project activities from design to implementation. As project activities will become spatially and socially more specific, public stakeholder consultation and engagement will expand and deepen. The three stages of public consultations are: Strategic, Regulatory, and Market Consultations; Regional, District Civil Society Stakeholder Consultations and Engagement; and Local Government, Community, and Citizens Consultations and Engagement. This sequencing ensures that stakeholders are engaged at the point where decisions remain influenceable, and that consultation intensity increases as geographic footprints and potential impacts become clearer, consistent with the principles of meaningful consultation, inclusiveness, proportionality, and iterative feedback loops under ESS10.

Three Bank-led technical meetings with selected institutional stakeholders and private stakeholders took place during project preparation. The meetings focused on strategic, regulatory, and market aspects of the project. Additional consultations will be carried out continuously throughout the project implementation in line with the three-phase approach, consistent with the Stakeholder Engagement Plan (SEP). Categories of stakeholders to be consulted include, but are not limited to:

Government and regulatory agencies

Ministry of Finance

Ministry of Planning and Economic Development

The Ministry of Energy (MoE)

Ministry of Land and Country Planning

The Ministry of Environment and Climate Change

Ministry of Public Works

Ministry of Internal Affairs

Ministry of Agriculture and Food Security

Electricity Generation and Transmission Company (EGTC

The Electricity Distribution and Supply Authority (EDSA)

Environment Protection Agency - Sierra Leone (EPA-SL)

The Electricity and Water Regulatory Commission
Nuclear Safety and Radiation Protection Authority

Private sector investors

- Distributed renewable energy firms (DRE), Banks, and E-waste recycling firms

Non-Governmental Organizations

- Civil society organizations - Community-based organizations
  Local stakeholders
- Local leaders - People living near facilities to be constructed by the project - People whose land is acquired by the project - People whose livelihoods are affected by the project.

Disadvantaged and vulnerable groups

- Elderly - individuals with chronic diseases and pre-existing medical conditions –

  Persons with disabilities. Women and girls - Children with special needs - Orphans

All the above stakeholder groups shall be consulted and engaged through the implementation of the SEP. The SEP is a living document that shall be updated to continuously identify all project stakeholders, including their priorities and concerns, to inform project implementation, including monitoring and management of grievances.

Grievance Redress Mechanism (GRM)

The GRM provides complaint or resolving measures for any project-related dispute, appropriate redress actions, and avoids the need to resort to judicial proceedings. A project-level grievance redress mechanism has been established in the SEP. The GRM provides opportunities to settle matters amicably at the local level, before they are escalated to the judicial level. The GRM includes matters related to GBV/SEA/SH, which shall be handled with confidentiality. The project GRM may also address disagreements about electricity access and other related matters. The PIU will assign a specific staff member to ensure that this is functioning properly. The GRM shall be activated prior to hiring any project worker. Local language brochures should be provided, reiterating the functioning of the GRM.

A separate GRM for workers, incorporated into the Labor Management Procedure (LMP), shall be prepared by the effective date to manage work-related matters.

Capacity Building

For effective implementation of the ESMF, the E&S capacity of the PIU shall be enhanced; likewise, the capacity of its associated agencies, ministries, and the DRED companies. The RCU (Regional Coordination Unit) shall facilitate the training of the PIU, its associate government institutions, and the DRED companies by acquiring the services of seasoned international consultants. The PIU E&S specialists shall facilitate and/or provide training to counties, districts, and community stakeholders, likewise, to selected DRED company entities. The future E&S specialists, including gender or GBV specialist, shall be provided with training on project risks, impacts, mitigation measures, and their monitoring and reporting responsibilities.

Disclosure of the ESMF

The DARES Project national project preparation Office/PIU will disclose the ESMF as required by the Sierra Leone EIA public notice and review procedures, as well as the World Bank ESS Disclosure Policy. Copies of other E&S instruments are required to be disclosed in the same manner. The ESMF and subproject ESIA, ESMP, and other relevant instruments will be disclosed by the PIU on the PIU/EDSA and the Ministry of Energy websites.

Budget

Table 1: ***Estimated Budget to Implement the ESMF***

Activities	Unit	No. of Units	Unit Cost (US$)	Extended Cost (US$)	Comments
Salaries for three (3) E&S Specialists, including GBV at PIU	Months	60	12,000	720,000	Salaries will be subject to contract renewal based on satisfactory performance
Salaries for recruiting three (3) E&S support staff at PIU	Months	60	1,850	410,700	Salaries will be subject to contract renewal based on satisfactory performance
Capacity building for E&S staff of EGTC, EDSA, MOE, EPA, DRE companies, and civil society	Weeks	5	50,000	525,000	An estimated 30 trainees from the four institutions for a period of 5 years.
Preparation of the training manual, including the	month	1	15,000	15,000	

cost of reproduction					
Disclosure, implementation & Monitoring of safeguards	Year	5	15,000	75,000	
Total Cost US$				1,270,700	

1 INTRODUCTION

1.1 Context and Project Background

In Sierra Leone, the rate of electricity access is 36 percent, and is only 18 percent outside Freetown. Furthermore, poverty rates for households with access to electricity are between 13.5 and 20.2 percentage points lower than those without electricity access. Least cost modeling indicates that 30

percent of the unserved population can be reached most efficiently through DRE solutions. Thus, the CPF's Objective 3.1 is 'Build resilient infrastructure (power, mobility, technology) for enhanced competitiveness', which recognizes the importance of increased access to electricity and improved quality of supply for improving almost every aspect of life in the country, from manufacturing (including agro-processing), mining, tourism, to education and health services. Sierra Leone's National Energy Compact targets 78 percent electricity access by 2030, up from 36 percent today. To reach this goal, the Government plans to connect at least 720,000 households through a combined grid and DRE pathway. A substantial share of near-term gains will come from DRE solutions, mini-grids, and standalone solar, aimed at reaching at least 560,000 households by 2030, with grid densification/extension and regional power imports delivering the remainder.[48]

The DARES Sierra Leone project has a nationwide scope. The project aims to provide electricity to households, firms, and public institutions in a least cost and timely manner. Most of the project's funds will be used to stimulate private construction and operation of off-grid electricity supply systems by providing financial incentives and technical support. Some of the project funds will be used to acquire, by competitive tender, supply systems for selected institutions/communities. The project will also co-finance Technical Assistance.

1.2 Project Development Objectives and Components

The PDO is to increase electricity access for households, businesses, and public institutions using private sector-led Distributed Renewable Energy Solutions (DARES) in Sierra Leone. Progress toward the achievement of the PDO will be measured by using the following indicators:

a. People provided with access to electricity (number);

b. Farmers and MSMEs provided with access to electricity (number);

c. Public institutions (schools, healthcare facilities) provided with access to electricity

The DARES Program is structured around four components. In Sierra Leone, the project will support decentralized renewable energy market development to accelerate electricity access in rural and peri-urban areas. The indicative activities to be financed will be aligned with the following components:

Component 1 (US$250 million): Connecting People and Businesses with affordable DRE solutions, including mini-grids, mesh-grid, and standalone systems to foster local development.

Component 2 (US$100 million): Powering Food Security through DRE-based irrigation, cooling, and agri-processing solutions to build resilience of food supply chains in West Africa.

Component 3 (US$50 million): Powering Human Capital through the roll-out of the "Energy-as-a-Service" (EaaS) model to strengthen critical public infrastructure (incl. health centers and schools).

Component 4 (US$50 million): Technical Assistance focused on enabling environment as well as regional tender design and capacity building of national Rural Electrification Agencies and Sector Regulators.

The country allocation for the Republic of Sierra Leone is US$60 million. The Sierra Leone budget allocation per project component will be confirmed during project appraisal and detailed in the Project Appraisal Document (PAD).

The scope of the project is country-wide. DARES Sierra Leone will cover all of the country's five (5) administrative Regions, namely, the Northern, Eastern, Southern, North-Western Provinces, the Western Area, and their 16 respective Districts, focusing on underserved communities. The selection of the number of beneficiary communities in each county will be subject to government and private sector consultations, establishing clear and transparent investment criteria prior to project effectiveness.

1.3 ESMF Objectives

This ESMF has been prepared as a guideline to address potential risks and impacts in the implementation of the project, as the environmental and social impact assessment (ESIA) of the project cannot be carried out until sub-project locations have been identified. The ESMF sets out the principles, rules, guidelines, and procedures that the PIU/(ESDA) should follow when assessing the environmental and social risks and impacts of sub-projects activities. It provides: i) measures and plans to reduce, mitigate and/or offset subprojects' adverse risks and impacts, ii) basis for estimating and budgeting the costs of mitigation measures, iii) information on the role and responsibilities of the EDSA in addressing environmental and social risks and impacts, iii) general information on all the five (5) administrative Regions, and their 16 respective Districts in which subprojects are expected to be located and any potential environmental and social vulnerabilities of the area; and iv) on the potential impacts likely to occur and mitigation measures expected to be used. This ESMF is a screening tool to identify potential environmental and social risks and impacts and mitigation measures for project and sub-project activities within the context of DARES. This ranges from no environmental work being required or the application of simple mitigation measures to the preparation of comprehensive ESIA reports and ESMPs. The process is consistent with Sierra Leone's environmental policies and laws. Environmental and social screening procedures will enable implementers to identify, assess, and propose mitigation measures for potential negative environmental and social impacts identified. The specific objectives of the ESMF are as follows:

a. Assess the potential E&S risks and impacts of the proposed project and propose their mitigation measures;
b. Establish clear procedures and methodologies for the environmental review, approval, and implementation of projects in the energy and electricity sector;
c. Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring E&S issues/concerns related to the activities;
d. Determine the environmental management capacity building needs for the EPA, MOE, and ESDA;
e. Address mechanisms for public consultation and disclosure of project documents as well as redress of possible grievances;
f. Establish the budget requirements for implementation of the ESMF;
g. Determine the institutional arrangements needed to satisfactorily screen subprojects, including identification of the safeguard instruments to be prepared, the hiring of the consultants who will prepare them, and the identification of who will supervise the work of the consultants and contractors;

h. Identify who will be responsible for the preparation of the TORs for ESIAs, and the ESMPs.

i. Provide resources for implementing the ESMP.

1.4 Environmental and Social Risk

Overall, both environmental and social risks of the project are rated substantial. The environmental risk of the project is rated substantial due to the nature and scope of program activities, the environmental sensitivities of the beneficiary countries, the local context, and the capacity of the respective countries to manage the environmental risks of the program activities. The environmental risks are attributable to activities proposed under components 1, 2, and 3 on the provision of solar-powered systems to households and businesses, solar irrigation and cold chain schemes for agricultural productivity, and standalone solar systems to public institutions, respectively. The capacity of the EDSA and the department of the Ministry of Energy responsible for rural electrification to manage E&S risk of these activities at the construction and operation stages should be strengthened in anticipation of these risks by recruitment of competent specialists and establishment of an institutional Environmental and Social Management System (ESMS) for risk management, monitoring, and reporting. Given the weak capacity of these institutions, experienced consultants who have worked on Bank-financed projects of at least similar risk magnitude are key to developing a sustainable system and complementing team efforts.

The social risk of the project is rated substantial for the following reasons. The program could generate low to moderate levels of land acquisition for the mini-grids, irrigation pumping stations, and the cold storage and agro-processing infrastructure. There could be minor land acquisition impacts for the connection to the mini-grids and off-grid electricity solar systems. Occupational health and safety (OHS) risks are moderate to substantial, with higher risks involved in the installation and operationalization of rooftop solar systems for public institutions and the handling of chemicals and heavy metals. While the number of labor influx is expected to be limited, they are likely to enter remote, vulnerable communities where they will have a substantial power difference. There are labor risks in the solar PV supply chain. Depending on the technology used, energy storage in batteries poses a specific fire hazard for runaway fires. The involvement of multiple private sector companies implementing sub-projects simultaneously, the risks of elite capture and nepotism linked to access to project benefits (electricity services), combined with the challenges in stakeholder engagement and monitoring social risks in difficult and remote areas, justify the risk rating.

1.5 Approach for ESMF Preparation

This ESMF has been prepared in accordance with the guidelines of the World Bank's ESS requirements and applicable Sierra Leone environmental assessment procedures and guidelines. The following approach and techniques were used in the development of this ESMF:

- Literature review and data gathering through a desktop study.
- Virtual communications with the existing energy project PIU.
- Lessons learnt from the implementation of the Energy Access Project (EAP)
- Review of minutes of technical meetings between the World Bank and targeted institutional and private stakeholders as part of project preparation.

- Data analysis for risks/ impacts identification and guidelines for the preparation of ESMPs for similar projects.
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To ensure that all project activities are appropriately screened for environmental and social issues at their conception stage, a simple screening tool (See Annex: 15.1) was developed to screen each project in terms of:

- Appropriate risk category
- Applicable local and international regulations and standards (e.g., labor, pollution, occupational health, and other standards
- Applicable World Bank standards
- Level of stakeholder engagement (both sectoral and project level)
- Existing environmental and other (e.g., compensation) risk management measures; and
- Location sensitivities (e.g., sensitive environments and culture)

The screening tool provides the necessary information to appropriately scope ESIA studies and/or prepare ESMPs. These will include environmental, social, and other due diligence activities, including security measures.

2 POLICY AND REGULATORY FRAMEWORK

2.1 National Energy Policy

The Sierra Leone National Energy Policy has been evolving over the past 15 years. The National Electricity Act of 2011 is the governing policy for all current energy projects. The Electricity Act of 2011 decommissioned the National Power Authority (NPA) and created two new entities: the Electricity Distribution and Supply Agency (EDSA) and the Electricity Generation and Transmission Company (EGTC). While the EGTC would potentially source power from the West African Power Pool (WAPP), the EDSA became the single buyer to procure power from EGTC, Car Power Ship, and other Independent Power Producers (IPP).

To regulate the supply of electricity, in pursuit of ensuring high-quality electricity distribution to citizens in Sierra Leone, the Government enacted the Sierra Leone Electricity and Water Regulatory Act of 2011. The Act authorized the establishment of an Energy Regulatory Commission to regulate the energy and water sector.

The commission has the power to regulate the activities of the energy industry under its Act and the Energy Laws, and without limitation to the generality of its mandate, the commission shall carry out the following functions:

a) issue and (as the case may be) renew, amend, suspend, revoke, and cancel a license

b) monitor compliance with the terms of licenses
c) provide guidelines on rates chargeable for the provision of electricity services
d) protect the interests of consumers and providers of electricity
e) monitor standards of performance for the provision of electricity
f) initiate and conduct investigations into the quality of services given to consumers
g) promote fair competition among public utilities
h) conduct studies relating to the economy and efficiency of public utilities
i) make public utilities' property valuation considered necessary to its mandate
j) collect and compile the necessary public utilities data vital to its obligations
k) advise any person or authority in respect of any public utility
l) maintain a register of public utilities and
m) carry out other activities conducive to the attainment of the objective of the commission stated in subsection (1)

The Ministry of Energy (MoE) leads the formulation and implementation of the policies, projects, and programs mentioned above. The MoE provides oversight for all sector agencies, including EGTC, EDSA, EWRC, and Nuclear Safety and Radiation Protection Authority (NSRPA).

Not unlike the energy policy, other policies that are pertinent to the preparation and implementation of the DARES Sierra Leone Project have also evolved in five decades; those policies include:

- The Factories Act, 1974; amended, Employment Act, 2023
- The Forestry Act, 1988 amended in 2022
- The Forestry Regulations of 1989
- Wildlife Conservation Amendment Act, 2022
- The National Environment Policy, 1994
- The Sierra Leone Environment Protection Act, 2022
- The National Forestry Policy, 2010
- National Electricity Act of 2011; and the National Electricity (Amendment) Act, 2018
- The Sierra Leone Electricity and Water Regulatory Act 2011
- The Sierra Leone Electricity and Water Regulatory Commission (SLEWRC)
- The Local Government Act, 2017
- Nuclear Safety and Radiation Protection Act, 2012
- The Employment Act, 2023
- The National Lands Policy, Sierra Leone, 2017 And Customary Land Rights Act, 2022, and
- National Land Commission Act, 2022

2.2 The Factory Act, 1974, amended, The Employment Act, 2023

The Employment Act, 2023, replaced the 30th of May 1974 Factory Act. The new Act addresses health and safety measures as they concern any factory worker. It protects the worker through demands for all aspects of cleanliness, reports of all injuries, accidents, diseases, and deaths.

A Factories Appeal Board is in operation and has the duty of hearing and determining any appeal submitted by factory owners, thus giving the right where it is due. Going by the interpretation of the

word factory, as stipulated in this Act, industrial companies are factory-based companies and are therefore covered by any legislation about this industry.

This Act covers workplace health and safety, ensuring the following.

1. Enough and suitable sanitary facilities are to be provided for employees.
2. Printed copies of any regulations made under any part of the act that is to be enforced within the workplace should be posted in the factory.
3. Owners of factories shall make sure the necessary precautions are taken to ensure the safety of employees.
4. Competent persons should oversee machinery, and two or more engineers should not oversee one piece of machinery.
5. Any factory machinery developing more than 250 horsepower or where any amount develops more than 75 horsepower should be under the general supervision of an engineer.
6. Any factory having machinery developing more than 250 horsepower shall be inspected regularly by an engineer.
7. Accidents should be reported to the respective authorities as prescribed in the act

This Act addresses issues of occupational health and safety, hiring of experts, work permits, and hiring of labor, which is very important for this project, and as such, EDSA and particularly the contract should make constant reference to this document.

2.3 The Forestry Regulations 1989, amended in 2022

These regulations came into force on the 1st of July 1990. The Chief Conservator holds the same responsibilities as he does for the Act of 1988 amended in 2022, being the head of the Forestry Division. Generally, community forests are managed by the Forestry Division or, by agreement with the Division, it could be managed by the local government or a Community Forest Association. Based on this responsibility of the Division, no protected forest shall be tampered with in any way as is stated in section 21, subsection (2) of the Forestry Act- amended in 2022, without written permission from the Chief Conservator of the Forest. In section 15 of the Forestry Regulations amended in 2022, subsection (1) states that a license may be issued by an inspector of the Forestry Division authorizing the holder of the mining lease to clear land in a classified forest for the purpose of an activity. However, having acquired his license, deforestation of, or vegetation removal from the environment, can only be affected by the proponent under certain conditions. These conditions are found under section 15, subsection 3, and are highlighted below.

1. Removal of vegetation can be done for an operation only within an area licensed for this purpose.

2. The specified land areas shall be cleared within a stated time, but trees requested not to be felled, removed, or damaged are to be left standing.

3. Trees to be felled shall be identified, except where total felling is authorized

4. A forest severance fee and a minor forest produce fee shall be paid in respect of all forest products that are merchantable, which may be removed by the clearance of vegetation.

5. At the completion of the activity, the area shall be replanted with approved crops or trees by the proponent, or provision made for this to be done by payment of the estimated reforestation cost.

6. The required method of cultivation and silviculture specified by the Chief Conservator must be employed.

For environmental protection, it is stated in section 38 of part XI that no land between the high and low watermarks, nor that above the high-water mark on both sides of the bank of any waterway, covering a distance of one hundred feet (approx. 33m), shall be cleared of any vegetation except permitted by a clearance license. Sacred bushes are protected by the stipulated regulations of section 40, whereby clearance of vegetation from land designated as a sacred bush is prohibited except by clearance authority from the Chief Conservator.

2.4 The Wildlife Conservation Amendment Act, 2022

The Wildlife Conservation Act, 2022, and the Forestry Act, amended in 2022, are the main legislations that deal with issues of Biodiversity Conservation in Sierra Leone. It provides for the establishment, conservation, and management of National Parks, Game Reserves, and other forms of Natural Reserves.

Specific provisions dealing with the protection, management, and conservation of these areas and the limitations therein are highlighted in Part II of the Act and include the following:

1. Prohibition of all forms of hunting, capture, and other activities leading to the injury of wild animals;
2. Destruction of any plant form by any means, including fire;
3. Fishing within these protected areas;
4. Erection of structures, construction of dams, forestry, agriculture, mining, or prospecting activities;
5. Introduction of species from outside the boundaries of the reserve.

The Wildlife Conservation Act, 2022, draws attention to the protection of wildlife within forest conservation areas. This Act will guide EDSA and the Contractors to ensure that areas that are prohibited from hunting and the destruction of all forms of wildlife species are respected. Since the project passes through districts that are of high forest conservation values, it is important that EDSA and the contractors make reference to this Act.

2.5 The National Environmental Policy 1994

The National Environmental Action Plan (NEAP) was an outcome of the 1992 Rio Declaration on Environment and Development after endorsement by the GoSL. The NEAP recommended a set of actions that were to be taken to redress environmental degradation and facilitate the sustainable utilization of natural resources. One of the recommendations of NEAP was to develop a National Environmental Policy.

The National Environmental Policy was developed in 1994 to promote sustainable social and economic development through sound management of the Sierra Leone environment. The policy promotes co-operation with other governments, relevant international/regional organizations, local communities, Non-Governmental Organizations (NGOs), and the private sector.

The National Environment Policy requires all Ministries, Departments, and Agencies (MDAs) as well as development initiatives to assure the quality of life for all Sierra Leoneans. The Policy directs that Sierra Leoneans must enjoy an adequate and sustainable quality of life by the fulfillment of basic needs and provision of amenities through appropriate strategies. A key policy objective is to ensure the provision and maintenance of adequate and affordable healthcare for all. The recently established Ministry of the Environment now houses the National Environment Policy, 1994, and plays a facilitating, coordinating, and advisory role in ensuring its implementation and sets of relevant and acceptable standards.

This is the national policy that guides and directs all environmental management issues in the country, and so it is important that EDSA and the contractors closely study this policy document.

2.6 The Local Government Act, 2017

This Act deals with the establishment and operation of local councils around the country to enable meaningful decentralization and devolution of Government functions. It stipulates that a local council shall be the highest political authority in the locality and shall have legislative and executive powers to be exercised under this Act or any other enactment. It shall be responsible, generally, for promoting the development of the locality and the welfare of the people in that locality. The local council shall source resources allocated by the central government and its agencies, national and international organizations, and the private sector.

Proponents are bound to operate within areas controlled by one local council or shared by two or more local councils. There is also a relationship between the local council and the Chiefdom within which a proponent operates. Hence, proponents shall involve local councils in their development work. The schedules in the Local Government Act outline the functions of various MDAs that have been devolved to local councils.

The project areas are within the jurisdiction of the local councils, and these councils have the mandate to monitor some of these projects as they house the Environment and Gender officers of the Ministry of Energy and the Ministry of Gender, respectively.

2.7 The Sierra Leone Environment Protection Act, 2022

The Act, which was signed as a legal document in September 2008 and amended in July 2010, established the Agency. Following the enactment of this Act, and its update/amendment in 2022 a National Environment Protection Board was established within the Environment Agency. The Board facilitates coordination, cooperation, and collaboration among Government Ministries, local authorities, and other governmental agencies in all areas relating to environmental protection. The Department, pursuant to the Act, coordinates environmentally related activities and serves as the focal point of national and international environmental matters relating to Sierra Leone.

According to this Act, an Environmental Impact Assessment (EIA) report is required for certain types of project activities. The contents of the assessment must be included in a report that should be submitted to the Director of the Department. A proponent requesting to carry out an activity that may compromise the benign state of the environment would be mandated to commence its operations by the issue of an EIA license, on approval of a submitted EIA report. The Board may also disapprove of

issuing an EIA license if it envisages that the proponent's activities would have a significant adverse effect on the environment and the community.

Projects requiring an EIA are those, as given in the first schedule of the Act, whose activities involve or include the following:

1. Exploitation of hydraulic resources (e.g., dams, drainage and irrigation projects, water basin development, and water supply).
2. Infrastructure (e.g., roads, bridges, airports, harbors, transmission lines, pipelines, and railways).
3. Industrial Activities (e.g., metallurgical plants, wood processing plants, chemical plants, power plants, petrochemical plants, and refineries).
4. Extractive industries (e.g., mining, quarrying, extraction of sand, gravel, salt, peat, oil, and gas).
5. Waste management and disposal (e.g., sewage systems and treatment plants, landfills, treatment of plants for household and hazardous waste).
6. Housing construction and development schemes.

Subject to the Act, regulations are made, as given in section 34, to establish national environmental standards, pertaining to (1) water quality, (2) effluent limitations, (3) air quality, (4) waste, (5) atmospheric protection, (6) Ozone protection, (7) noise control, (8) pesticide residues and (9) odor. The introduction of any internationally banned chemicals or substances into Sierra Leone is prohibited, as well as the discharge of any hazardous and toxic substances into the air, land, and waters of Sierra Leone. Failure to comply with this regulation is an offence, and the defaulting company is liable on conviction to a fine not exceeding Le 2,000,000 or a term of imprisonment not exceeding two years, or both.

The second schedule of this Act gives several determining factors that qualify the preparation of an EIA. These factors are given below as stated in the schedule.

1. The impact on the community
2. The location of the project
3. Whether the project transforms the locality
4. Whether the project has or is likely to have a substantial impact on the ecosystem
5. Whether the project results in the diminution of the aesthetic, recreational, scientific,
6. historical, cultural, or other environmental quality of the locality
7. Whether the project endangers any species of flora or fauna, or the habitat of the flora and
8. fauna of the locality
9. The scale of the project
10. The extent of degradation of the environment
11. Whether the project will result in an increased demand for natural resources in the locality
12. The cumulative impact of the project together with other activities or projects on the environment
13. The contents of the EIA

The third schedule of the Act defines the contents to be considered in preparing the EIA. It is stated in this Act that an EIA shall contain a true statement and description of the following;

1. The location of the project and its surroundings.
2. The principle, concept and purpose of the project.
3. The indirect or direct effects the project is likely to have on the environment.
4. The social, economic, and cultural effects that the project may have on society.
5. The communities, interested parties, and Government Ministries consulted
6. Any action or measures which may avoid, prevent, change, mitigate or remedy the likely effect on society
7. Any alternatives to the project.
8. Natural resources to be used in the project.
9. The plans for decommissioning the project.
10. Any other information necessary for a proper review of the potential environmental impact of the project.

The minister has the authority, as stated in section 33, to make regulations that would make it incumbent on the project owner to maintain insurance or other appropriate financial security. This is to guarantee payment of compensation for any damage resulting from the operations of the project. Alternatively, the proponent may provide a guarantee for payment, for preventive measures, or for rehabilitation where necessary.

This Act is the primary national environmental management instrument that guides the conduct of Environmental management studies, so it is important that MoE, EDSA, and contractors pay particular attention to the provisions in this Act for this project.

2.8 Requirements and Procedure to Acquire an EIA License

Having presented the details of the EPA Act, 2022, this is an infrastructure project that requires an EIA License, especially when it is clear that the impacts are going to be substantial.
The Sierra Leone Environmental Protection Agency (EPA-SL) presents the following procedures/stages of an EIA process.

- **Registration**: Write a letter of application to the EPA-SL introducing the project and requesting a screening form (this can be done on the client's behalf). EPA will then acknowledge the letter with instructions for the purchase of the screening form, which will be jointly filled in by the consultant and the Project Implementation Unit (PIU) and submitted to EPA-SL for review. Currently, the cost of the form is Le 250,000 (two hundred and fifty thousand Leones).
- **Project Screening**: This EPA-SL reviews the contents of the screening form, categorizes the project, and gives approval to proceed with the study. A ground-truthing visit to the project site is made during this stage, wherein a team of GIS technicians and environmental officers from EPA-SL visit the site to confirm coordinates/locations provided and determine areas of concern at the locations that may need to be specifically addressed during the ESIA study. The practice has been that the client (EDSA in this case) provides transport and allowance for the EPA team.
- **Scoping**: Following EPA-SL's approval to proceed with the study, a cross-section of the EIA team will do a reconnaissance visit to the project sites to determine the scope of environmental issues and factors to be considered during the main study to prepare guidelines for the conduct of the EIA. A scoping report will then be compiled based on this assessment, which will include Terms of Reference (ToR) for EPA-SL's approval.
- **Environmental and Social Impact Studies and Preparation of the Report**: This stage involves data collection, analysis, and reporting of the findings of the Environmental and Social Impact

Assessment (ESIA) study. The report will document clearly and impartially the project's impacts, the proposed measures for mitigation, the significance of effects and impacts on the environment, and the concerns of the interested public and the communities affected by the project. The report will be presented in two volumes: The Main ESIA Report and the Environmental and Social Management Plan Report.

- **Public Hearing and Review of the ESIA Report**: Two or more Public Consultation and Disclosure workshops shall be held by the client. The final ESIA will incorporate the conduct of the public consultation and Disclosure workshop.
- **Decision Making**: The EPA-SL will review and, if satisfied with the content of the report, approve it. The license is issued on approval following the payment of a license fee, which is contingent on the project footprint.
- **Compliance and Enforcement**: This stage involves environmental and social monitoring and reporting of project activities to ensure that they comply with the terms and conditions of the license. EPA-SL requires that quarterly and annual reports be submitted as a prerequisite for the annual renewal of the license. Monitoring fees are also charged, which is 20% of the license fee.

2.9 The National Forestry Policy, 2010

The goal of the National Forestry Policy, 2010, is for the conservation, establishment, protection, and management of trees and forests for the sustainable development of Sierra Leone. To ensure sustainable forest management, the policy focuses on eight priority areas: (i) forest land management, (ii) wetlands management, (iii) forest-based industry and products, (iv) ecosystem conservation management, (v) education and awareness, (vi) research and monitoring, (vii) capacity building, and (viii) strategic planning.

Under forest land management, the policy aims at empowering rural communities to conserve and develop Sierra Leone's forest resources for the economic and environmental benefit of the present and future generations. This entails that the policy promotes economic opportunities that encourage reforestation and planting trees as a business, e.g., trees for poles.

This policy is an important reference document that would guide EDSA and the Contractors in their work because Component 1 of the project will involve the construction of transmission lines within districts that host important forest zones, though the transmission line will follow existing rights of way along existing roads.

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2.10 National Electricity Act 2011, amended in 2018

This Act unbundled the former National Power Authority (NPA) into two separate entities, the EGTC and EDSA. Part VI outlines EDSA's cardinal function as the supply, distribution, and retail sale of electricity for the entire country except in areas where a license has been issued to another qualified entity.

Part of the National Electricity Act of 2011, amended in 2018, deals with land acquisition and related environmental practices, which makes this Act very important for this project. This Act gives the Minister the powers to acquire land for EGTC or EDSA or both, even if the land is private property or there is some private interest in the land. Such utility will be subject to payment of adequate compensation to be paid by the GoSL, firstly, and the Authority or company will reimburse the

government at a later time. During the life of EGTC or EDSA or both, the agencies will at any time decide to sell, lease, or dispose of any land easement, property, or interest in any land or waterway in a proper manner.

This Act gives the authority for the excavation of streets or roads for the purpose of laying a supply line, and the erection of poles and any other erections for the purpose. The company or Authority should co nsult the relevant ministry before excavating any street, and they shall rehabilitate the street or road after the breakage.

Section 58 of the National Electricity Act amended in 2018 gives the power to cut or lop any tree, shrub, or hedge which obstructs or interferes with any supply line of the company or the authority, the laying or erection of any supply line or proposed route of the supply. A fourteen-day notice shall be given to the occupier of the land before the lopping and cutting of any tree, shrub, or hedge.

Sections 59 and 60 of the said Act give the power to the Authority or designated company to enter land previously acquired for a certain purpose. The Authority has an obligation to give reasonable notice to the occupier of such land with the intention to enter and notice of the intention to enter and construct, respectively.

Electric cables shall not be placed across any navigable waterway, whether above or below or underground, without the consent and approval of the Minister. All companies or independent power producers should comply with all environmental health and safety legislation as per Section 62.

2.11 The Sierra Leone Electricity and Water Regulatory Commission Act, 2011

This Act establishes the Sierra Leone Electricity and Water Regulatory Commission (SLEWRC). The commission is therefore responsible for formulating, implementing, monitoring quality and compliance, providing tariff guidelines, licenses and implementing regulatory frameworks for the safe, secure, affordable and reliable supply of water and electricity in Sierra Leone.

As per Section 66 of the SLEWRC Act, no 13 of 2011, the Commission developed a mini-grid regulation in 2018. (SLEWRC Mini-Grid Regulations, 2018). The Regulation sets out general requirements to be adhered to by the mini-grid licensee to mitigate any adverse effects and impact of its operations and activities on the environment. The Regulation also sets out general requirements that mitigate any adverse effects and impacts of its operations and activities on the health and safety of staff members, consumers, and other individuals.

The PV and mix generation in Moyamba makes this Act very important for this project

2.12 Nuclear Safety and Radiation Protection Act,2012

This Act delineates issues dealing with radiation, which is also of environmental concern. The significance of this Act is to regulate, control, and supervise the acquisition, importation, exportation, transportation, and disposal of radioactive substances and devices emitting ionizing radiation. Non-ionizing radiation substances are added to the amended version of this Act.

Sections 29 and 30 of this Act clearly state that a license is required for the export and import, re-export, transit, or transshipment of any nuclear material, equipment, or technology. Written application of such license should be made to the radiation authority together with an assessment of

the nature of the radioactive substance or device emitting ionizing radiation and the magnitude and likelihood of exposure attributed to the substance or device; a description of the installation or practice; a safety impact assessment for the protection of workers and the public; all relevant information to support the application; and the prescribed fee.

This Act is important for this project because of the possible non-ionizing radiation that might be emitted during the installation of transformers

2.13 The National Lands Policy, Sierra Leone, 2017, and Customary Land Rights Act, 2022, and National Land Commission Act, 2022

2.14 Policy Objectives

This Policy highlights Land distribution (acquisition and allocation), access to land by all Sierra Leoneans and investors, land tenure systems, land use planning and regulations, land management and administration systems, and land adjudication systems. It is these guiding land and compensation issues that make this policy important to the project. The Customary Land Rights Act, 2022, and National Land Commission Act, 2022 fundamentally are restructuring land governance to promote equity, gender equality and secure land tenure. The key reforms include granting women equal rights to own and inherit land. They are also requiring 60% community consent for investments, protecting customary land rights, and mandating 30% female representation on land committee.

The following are policy statements in the National Lands Policy:

A. The sovereign title to Government/State lands and public lands shall vest in the National Lands Commission as follows:-
   I. As to Government/State lands in trust for the citizens of Sierra Leone as a whole; and
   II. As to public lands in trust for the citizens of Sierra Leone as a whole or in trust for the particular community that originally owned the land as prescribed by the statute or other law creating the same; and

B. The sovereign title to private lands shall henceforth vest as follows:
   I. As to land held under freehold tenure in the Western Area in the individual, group of individuals or corporate entity absolutely;
   II. As to communal lands in the Provinces in the new Chiefdom Lands Committee (instead of the Chiefdom Council) in trust for the particular community concerned;
   III. As to family lands held under family tenure in the Province in the family as a unit;
   IV. As to land held under Customary tenure in the Provinces in the Chiefdom Lands Committee/Village Area Lands Committee or the family which made the grant of usufructuary rights in perpetuity to the groups or individuals or corporate entity subject to the grantor's residuary rights.

According to the policy, the acquisition must be necessary for the interest of (1) defense, (2) public safety, (3) public order, (4) public morality, (5) public health, (6) town and country planning, and (7) development and utilization of the property to promote the public benefit.

2.15 International Treaties and Conventions

Sierra Leone has endorsed and ratified several international treaties and conventions. Among them are the 1972 Stockholm Declaration and the 1992 Rio Declaration, which were adopted by United Nations Conferences. Sierra Leone is also a signatory to the following environmental conventions: — Convention on Wetlands of Significant Importance Ramsar; Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); African Convention on Conservation of Nature and Natural Resources; Montreal Protocol for the Protection of the

Ozone Layer; Cartagena Protocol on Substances that deplete the Ozone Layer; Convention on Biological Diversity (UNCBD); Convention on Climate Change (UNFCCC); and the Convention on Desertification (UNCCD) and the Stockholm Convention on Persistent Organic Pollutants (POPs).

These conventions, protocols, and treaties promote the conservation of the environment and natural resources as well as occupational health and safety of workers while acknowledging the importance of social and economic development. This project triggers compliance with these international environmental instruments.

2.16 The Stockholm Convention on Persistent Organic Pollutants (POPs)

This Convention was adopted on the 22nd May 2001 in Stockholm, and Sierra Leone became a signatory to this convention on the 27th August 2001. Persistent Organic Pollutants (POPs) are chemicals that are persistent bio-accumulators found in fatty tissues. They are biomagnified through the food chain and adversely affect health and the environment. This convention recommends the elimination or restriction of production and use of all internationally produced POPs (i.e. Industrial chemicals and pesticides). The chemicals to be eliminated are Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Hexachlorobenzene (HCB), Mirixtexaphene, and Polychlorinated Biphenyls (PCBs).

2.17 Applicable World Bank Environmental and Social Standards (ESS)

The World Bank ESF provides methods and tools for client countries to carry out E&S risk assessments. Those tools are principally set out in the ten (10) ESS their respective guidance notes. In line with the application of those tools, as the specific locations for project interventions are yet to be identified, the ESMF is the appropriate instrument required to meet the World Bank's ESF requirements. The Project is not expected to impact natural habitats. All activities financed through the project are subject to the World Bank Environmental, Health and Safety (EHS) Guidelines, including those on Electric Power Transmission and Distribution. The project has prepared and disclosed an Environmental and Social Commitment Plan (ESCP) and a Stakeholder Engagement Plan (SEP).

Eight out of the ten (10) World Bank ESS have been screened as relevant. The eight (8) ESS applied, the rationale for their application, and their related ESS E&S tools are presented in the table below.

Table 2 : ESS applied to Dares Sierra Leone

	ESS Applied	Rationale	Related E&S Management Tools
1	ESS1: Assessment and Management of Environmental Risk and Impacts	Project activities are likely to induce short-term, medium-term, and possibly long-term (hazardous waste risk) adverse E&S impacts on biodiversity, environmental, and community/social resources.	ESMF, Environmental and Social Screening, ESIA, ESMP, and Stakeholder Engagement.
2	ESS2: Labor and Working Conditions	Project activities may adversely affect the working conditions of direct and indirect workers.	LMP, GM, Code of Conduct, and Stakeholder Engagement.
3	ESS3: Resource Efficiency and Pollution Prevention and Management	Project activities are likely to induce air pollution, noise, ordinary waste, and hazardous waste.	ESMF, Environmental and Social Screening, ESIA, ESMP, and Stakeholder Engagement.
4	ESS4: Community Health and Safety	Project activities are likely to induce community health risks.	ESMF, Environmental and Social Screening, ESIA, ESMP, Stakeholder Engagement
5	ESS5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	Project activities are likely to induce land acquisition without involuntary resettlement or physical or economic displacement.	Willing buyer and willing seller guidelines and Stakeholder Engagement
6	ESS6: Biodiversity Conservation and Management of Natural Resources	Project activities are likely to have adverse impacts on biodiversity and natural resource management.	ESMF, Environmental and Social Screening, ESIA, ESMP, and Stakeholder Engagement.
7	ESS8: Cultural Heritage	Project activities are likely to have adverse impacts on tangible and intangible cultural resources.	ESMF, Environmental and Social Screening, ESIA, ESMP, Cultural Heritage Management Plan (CHMP), and Stakeholder Engagement.
8	ESS10. Stakeholder Engagement and Information Disclosure.	Project activities are likely to induce adverse impacts on social cohesion due to social exclusion, elite capture, disinformation, market dynamics, absence of transparency, etc.	SEP, Environmental and Social Screening.

2.18 Other World Bank Instruments, Including Health, Safety & Environmental Guidelines

In addition to the World Bank Group's eight (8) ESS, its Environmental Health and Safety Guidelines also apply to this project. They include general guidelines as well as sector-specific guidelines for electricity. The general EHS guidelines are designed to be used together with relevant Industry Sector EHS guidelines, which guide users on EHS issues in specific industry sectors. The energy sector specific guidelines are: Guidelines for Electric Power Transmission and Distribution. Below are the World Bank EHS Guidelines, relevant to various components of the proposed project.

2.18.1 EHS Guidelines - Environmental

- Hazardous Materials Management
- Waste Management
- Noise
- Contaminated Land
- General Facility Design and Operation
- Communication and Training
- Physical Hazards
- Chemical Hazards
- Biological Hazards
- Personal Protective Equipment (PPE)
- Special Hazard Environments
- Monitoring

2.18.2 EHS Guidelines – Community Health and Safety

- Structural Safety of Project Infrastructure
- Life and Fire Safety (L&FS)
- Traffic Safety
- Transport of Hazardous Materials
- Emergency Preparedness and Response

2.18.3 EHS Guidelines - Construction and Decommissioning

- Environment
- Occupational Health & Safety
- Community Health & Safety

2.18.4 The World Bank Environmental, Health And Safety Guidelines for Electric Power Transmission and Distribution

The EHS Guidelines for Electric Power Transmission and Distribution include information relevant to power transmission between a generation facility and a substation located within an electricity grid, in addition to power distribution from a substation to consumers located in residential, commercial, and industrial areas.

Some of the followings are addressed in the EHS Guidelines:

- Construction site waste generation; ·
- Terrestrial Habitat Alteration

- Construction of Right-of-Way
- Avian and Bat Collisions and Electrocutions

The PIU and the Contractor must take note of these guidelines. These guidelines above are available at:

http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines.

2.18.5 The World Bank Disclosure of Information

Disclosure of this ESMF, and other E&S instruments to be prepared for this project (e.g., ESIA/ESMP/LMP), will be done in line with the Sierra Leone EIA Laws and the World Bank's Policies. Disclosure will involve publication in national newspapers and under the guidance of the MOE Ministries or the EPA. The newspaper publications will inform the public of locations where the ESMF will be displayed for a period, for the general public to make comments and contributions. The evidence of Newspaper or website Publications will be used to disclose the ESMF on the World Bank External Website.

2.19 Gap Analysis Sierra Leone Laws and World Bank ESS

Sierra Leone's regulatory framework and the World Bank ESF are not fully compatible. There are gaps between Sierra Leone's laws and the World Bank ESS and Guidelines. Where Sierra Leone regulations differ from the ESS and World Bank Guidelines, including the various relevant Guidelines to be presented below, the DARES Sierra Leone project will adopt the more stringent/beneficial policy/regulation for the environment, for the communities, and for individuals. In this case, the differences between Sierra Leone's labor law and ESS2 are significant and call for attention. Below is a table presenting the gap analysis between the Sierra Leone legislation and the World Bank ESS, with particular focus on ESS2, and corrective measures to bridge the gaps. In case of conflict between national laws/regulations and the WB Environmental and Social Standards, the strongest regulation or the one which is more beneficial to the affected person or community will apply.

Table 3: Comparison of the Laws of Sierra Leone and World Bank ESS

Scope/Objective	Description of Bank Policy	Description of the Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts				
• Identify, evaluate, and manage the E&S risks and impacts of the project in a manner consistent with the ESSs. • To adopt a mitigation hierarchy approach to: • Anticipate and avoid risks and impacts • Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; • Once risks and impacts have been minimized or reduced, mitigate, and • Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.	The standard provides guidance on assessing the Project's potential environmental and social risks and impacts and addressing potential impacts through the planning and mitigation hierarchy approach.	Environment Protection Agency (EPA) Act (2022) mandates that no person shall commence an undertaking which, in the opinion of the Agency, has or is likely to have adverse effects on the environment or public health unless, prior to the commencement, the undertaking has been registered by the EPA and an environmental permit has been issued by the Agency in respect of the undertaking.	Even though the regulation seeks to anticipate and mitigate/avoid risks and impacts, it does not fully address potential impacts and the mitigation hierarchy approach, e.g., content-wise, it does not address impacts on the vulnerable.	• Assistance/compensation will be provided for the affected parties by government through the district and municipal assemblies at various project locations. • The MDAs and MMDAs will be fully involved in the project preparatory stage through consultations for them to become abreast with project components roles they will play during implementation. • The capacities of the MDAs staff on World Bank ESF will also be built at the early stage of project implementation to enable them to collaborate effectively in addressing this gap by identifying through meaningful consultation to involve vulnerable people. • --

Scope/Objective	Description of Bank Policy	Description of the Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
ESS2: Labor and Working Conditions				
• To promote safety and health at work, fair treatment, nondiscrimination, and equal opportunity of project	ESS2 promotes fair treatment, non-discrimination, and provision of equal opportunities for workers. It strongly encourages the protection of all project workers, including vulnerable groups such as women, persons with disabilities, children (of working age)	The Draft Employment and Employed Act (2023) advocates for improved working conditions, including a minimum living wage.	Although the EPA and other structures make provision for anticipated labor-related complaints and	• The project will adopt and enhance an existing transparent GRM, which addresses concerns promptly
workers including vulnerable workers such as women, persons with disabilities, children • To prevent the use of all forms of forced labor and child labor. To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law. To provide project workers with accessible means to raise workplace concerns.	and migrant workers, contracted workers, and primary supply workers, as appropriate. It provides certain requirements that the project must meet in terms of working conditions, protection of the workforce (especially the prevention of all forms of forced and child labor), and provision of a grievance mechanism that addresses concerns about the project. Under ESS 2, workplace processes will be put in place for project workers to report work situations that they believe are not safe or healthy, and to remove themselves from a work situation that they have reasonable justification to believe presents an	The Constitution of Sierra Leone (1991) Act No. 6, guarantees fair working conditions, equal pay for equal work, and fair compensation. The Factories Act (1974) provides for health and safety measures that advance better conditions for workers. It imposes obligations for protecting workers against accidents and injuries sustained during work.	redress, beneficiaries' access (distance and processes) to the co mmission at the district-level may be a challenge. The law does not explicitly mandate workers to remove themselves from such unsafe working places and silent on they not	• It will also develop labor management procedures e.g., working conditions, occupational health and safety, child labor, etc. (section 5.4). which will guide project implementers in managing labor-related issues. A LMP has been prepared, and will be consulted upon, adopted and disclosed by the GoSL prior to the effective date to meet the requirements of the ESS. Site-specific ESIAs/ESMPs with mitigation measures are required for any proposed subprojects. Workers will be sensitized to the LMP and their rights to remove themselves from unsafe workplaces and

Scope/Objective	Description of Bank Policy	Description of the Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
OHS Hazard identification and right of employees to remove themselves from such workplaces without being punished.	imminent danger to their life or health. Those workers will not be required to return to work until remedial action to correct the situation has been taken. Project workers will not be retaliated against or otherwise subject to reprisal or negative action for such reporting.		being retaliated against if they should do so.	will not be retaliated against if they do so in line with the LMP/ESS 2 provisions.
ESS3: Resource Efficiency and Pollution Prevention and Management				
To achieve the sustainable use of resources, including	The ESS3 provides requirements for projects to achieve the sustainable use	• The EPA Act (2022) mandates the EPA to	The EPA Act is inadequate for	The ESS3 provides requirements for projects to achieve the sustainable

Scope/Objective	Description of Bank Policy	Description of the Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
implementing measures that avoids or reduces pollution resulting from project activities	of resources, including energy, water, and raw materials, as well as implement measures that avoids or reduces pollution resulting from project activities. The standard places specific consideration on hazardous wastes or materials and air emissions (climate pollutants) given that the current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of present and future lives.	enforce compliance with established EIA procedures among companies and businesses in the planning and execution of development projects, including existing projects. • The E-waste Management Policy being developed by the EPA will enforce measures for the effective management of electronic waste, including the regulation of collection, disposal, and reuse of such waste.	addressing this issue, and the relevant policy (hazardous and e-waste management policy) is still being drafted.	To address ESS3 requirements, the Borrower will prepare, disclose, and implement an E-waste Management Plan (EWMP) and a Waste Management Plan prior to the implementation of any activity that will have the potential activity that will generate e-waste.
ESS4: Community Health and Safety				

Scope/Objective	Description of Bank Policy	Description of the Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
• To anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project lifecycle. • To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure. • To ensure that safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.	This standard recognizes that project activities, project equipment and infrastructure increase the exposure of project stakeholder communities to various health, safety, and security risks and impacts and thus recommends that projects implement measures that avoid or limit the occurrence of such risks. It provides further requirements or guidelines on managing safety, including the need for projects to undertake safety assessments for each phase of the project, monitor incidents and accidents, and prepare regular reports on such monitoring. ESS4 also provides guidance on emergency preparedness and response.	The Public Health Ordinance (1960) and Public Health Act (Amended in 2023) revises and consolidates all the laws and regulations pertaining to the prevention of disease, promote, safeguard, and maintain and protect the health of humans and animals, and provides for related matters.	The regulation does not consider the assessment of events and measures to deal with occurrences and emergencies	The law provides the platform to engage with stakeholders. A stakeholder engagement plan has been prepared and will be in place for project implementation. Community needs with respect to project activities will be assessed, and necessary measures will be taken. The project has developed a COVID-19 Response Plan to guide project implementation onsite.
ESS5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement				

Scope/Objective	Description of Bank Policy	Description of the Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
Resettlement planning and documentation; Cut off Date; Census and Asset Inventory; Consultation; Calculation of Compensation; Security of Tenure, Replacement Housing/Land; Squatters, Vulnerable Groups; Disclosure; Resettlement; Monitoring; Grievance.	All Key Topics of ESS 5, covered by Sierra Leone regulations, but with different outcomes. Relevant laws are: The Development-induced resettlement policy, 2020; EPA Act 2008 (amended in 2022 – On Disclosure of E&S instruments); National Social Protection Strategy 2022-2026(On Vulnerable Groups).	Various resettlement instruments such as ESMF encompassing resettlement issues, resettlement plan (ARAP/ RAP) and or livelihood restoration plan can be used depending upon the nature and degree of displacement. The Customary Land Rights Act, 2022, and National Land Commission Act, 2022 fundamentally are restructuring land governance to promote equity, gender equality and secure land tenure. The key reforms include granting women equal rights to own and inherit land. They are also requiring 60% community consent for investments, protecting customary land rights, and mandating 30% female representation on land committee.	There are major Gaps in substance and in application. The focus of the resettlement instrument in the Sierra Leonean context is on the resettlement of displaced inhabitants. No regulations or guidelines for the preparation of the land acquisition and resettlement plan. Consultation procedures are not detailed. The consultation is focused on compulsory land acquisition by the State. Cutoff Date not clearly defined.	The project has prepared an ESMF that excludes involuntary resettlement and sets out the requirements for willing buyer-willing seller, as well as the requirements for Voluntary Land donation. The project excludes subprojects requiring involuntary resettlement.

Scope/Objective	Description of Bank Policy	Description of the Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
			Squatters are considered unlawful. Not clear on the handling of security of tenure.	
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources				
• To protect and conserve biodiversity and habitats. • To apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity. • To promote the sustainable management of living natural resources. • To support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption	ESS6 promotes the conservation of biodiversity or natural habitats. and supports the protection and maintenance of the core ecological functions of natural habitats and the biodiversity they support. It also encourages projects to incorporate into their development, environmental and social strategies that address any major natural habitat issues, including identification of important natural habitat sites, the ecological functions they perform, the degree of threat to the sites, and priorities for conservation.	The National Protected Area Authority and Conservation Trust Fund Act (2012), the Forestry Policy (2010), and the draft Forestry Act 2022 and Wildlife Conservation Act 2022 provide measures for protecting biodiversity and ensuring the sustainable management of living resources. They promote co-management activities that require working with local communities to take governance actions that reduce the risk of biodiversity loss.		The project will take measures to protect and conserve biodiversity and habitats, and all requirements specified in the ESS6

Scope/Objective	Description of Bank Policy	Description of the Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
of practices that integrate conservation needs and development priorities.				
ESS8: Cultural Heritage				
• To protect cultural heritage from the adverse impacts of project activities and support its preservation. • To address cultural heritage as an integral aspect of sustainable development. • To promote meaningful consultation with stakeholders regarding cultural heritage.	This standard addresses physical or tangible cultural resources, which are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural heritage applies to involve subprojects involving excavations, demolition, and so forth as recognized by the Standard.	The Environmental Policy (1994) provides for collecting data on cultural heritage to further measures for preservation. The Monuments and Relics Act of 1962 and updated in 2001 also provides for the cultural heritage of archaeological, historical, and other scientific interest.	The regulations and policies do not address cultural heritage as an integral part of sustainable development and the promotion of equitable sharing of benefits	The National commission on culture provides a platform for collaboration with Chiefs, opinion leaders and community representatives, and other institutions to protect cultural assets. The project will go with the procedures outlined by the Commission in respect of cultural assets. The project will also go the extra mile to complement this collaboration with stakeholder engagement procedures enshrined in the SEP to educate communities to
• To promote the equitable sharing of benefits from the use of cultural heritage.	Projects involving excavations, demolition, movement of earth, flooding, or other environmental changes are to take cognizance of this standard in the ESMF.			appreciate the role of cultural values and assets in sustainable development, and also the need to share benefits accruing from the use of cultural assets. --- National commission on culture should be inform if a discovery is made on a worksite

Scope/Objective	Description of Bank Policy	Description of the Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
				and work must be stopped until the commission finishes its investigation and work.
ESS10: 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 with them, project-affected parties. To assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be considered in project design and environmental and social performance • To promote and provide means for effective and inclusive engagement	ESS10 seeks to encourage open and transparent engagement between the Borrower and the project stakeholders project-affected parties) throughout the project life cycle. The standard establishes a systematic approach to stakeholder engagement that potentially helps the Borrower to identify stakeholders and build and maintain a constructive relationship with them, as well as disclose information on the environmental and social risks and impacts to stakeholders in a timely, understandable, accessible, and appropriate manner and format. It recommends that stakeholder engagements commence as early as possible in the project development process and continue throughout the lifecycle of the Project. This allows for stakeholders' views to be	The EPA Act (2022) requires parties seeking permits to implement environmentally sensitive projects to develop an ESHIA and organize public disclosures following procedures that allow stakeholders at different levels to understand sources of risks and agree with proposed measures for monitoring and mitigation. The Right to Information Act (2013) provides for the disclosure of information held by public authorities or persons providing services to the public. It requires public disclosure processes that foster transparency and meaningful engagement.	The regulations to the RTI Act, have not been developed to fully operate mechanisms for disclosure or dissemination of information and grievance redress.	• The project has developed a stakeholder Engagement Plan. The SEP also includes a GRM based on an existing grievance redress mechanism for resolving grievances for DARES • The GRM is a decentralized and transparent system which ensures quick resolution of complaints and disputes, it also has the structure for disclosing vital information to requisite stakeholders • It also provides means for effective and inclusive engagement. This instrument which satisfies all the requirements of ESS 10 will be applied during project implementation to bridge the gaps in national regulations and policies

Scope/Objective	Description of Bank Policy	Description of the Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
with project-affected parties throughout the project life				
Scope/Objective	**Description of Bank Policy**	**Description of Government of Sierra Leone Regulation**	**Gaps Identified**	**Gap Bridging Actions**
cycle on issues that could potentially affect them. • 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. 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.	considered in the project design and environmental and social performance. The Borrower is also expected to implement a grievance mechanism to receive and facilitate resolution of concerns and grievances.			

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3 INSTITUTIONAL FRAMEWORK

The Ministry of Energy will have overall oversight of the DARES Sierra Leone Project Activities but will be closely supported by the Ministry of Environment and climate and several government agencies and local governments. A key agency is the Electricity Distribution and Supply Authority (EDSA). The ESDA will implement the Project by creating a Project Implementation Unit (PIU).

3.1 Ministry of Energy

The Ministry of Energy is the arm of the GoSL tasked with the responsibility to formulate and implement policies, projects, and programs on energy and provide oversight functions across the entire energy supply chain for all sub-sector agencies (which include electricity production, electricity transmission, electricity distribution, and supply) and other forms of energy supply and utilization coordinating and managing all aspects of energy in its various forms in the country.

This Ministry has oversight responsibility over EDSA and EGTC, and therefore, all technical and financial matters of the project will have to have clearance from the Minister and his technical team.

3.2 Ministry of Environment and Climate Change

The Ministry of the Environment, established in November 2019, is responsible for a range of government policies related to the protection and management of the environment and natural resources.

The Ministry is mandated to perform the following functions:

a. Lead on the development and supervision of the legal and policy framework for building national environmental resilience as it relates to climate change, natural resources management, including forestry and wetlands conservation
b. Provide policy advice to the President and government, take the lead on all aspects of the environment, and in particular make recommendations for the protection and management of the environment
c. Formulate and review environmental policies, legislation, and standards to ensure consistency and application of international policies relating to environmental protection to safeguard human health and wellbeing of people in Sierra Leone
d. Develop, coordinate, and implement climate change legislation, adaptation, and mitigation policies and strategies, programs, and initiatives in the country
e. Develop policies to ban and reduce the abusive use of plastic bags, and on the protection and management of environmentally sensitive areas
f. Ensure environmental compliance and enforcement in Sierra Leone through EPA-SL
g. Coordinate relations with national and international organizations dealing with environmental issues
h. Collaborate with all relevant Ministries, Departments, and Agencies working on environmental issues

i. Mobilize resources in support of strengthening environmental resilience
j. Perform any other function assigned to the Ministry by law or decision of the Cabinet of Sierra Leone

This recently established Ministry has a huge mandate has 4 subsidiary entities: EPA, National Protected Area Authority, Meteorological Agency and Forestry Division. It supervises the Environment Protection Agency, Nuclear Safety and Radiation Protection Authority, as well as the Forestry Department. All issues dealing with environmental impact assessment, environmental and social management plans, resettlement planning, as well as radiation protection, must be cleared by the Minister with the portfolio. Thus, EDSA and the Contractors must continue updating the Ministry about the progress the project is making as well as the challenges.

3.3 3.3 Electricity Generation and Transmission Company (EGTC)

EGTC is responsible for the generation, transmission of electricity, and the sale of electricity to EDSA as per the power purchase agreement approved. EGTC will also manage the national transmission grid, which connects electricity generation sources to customer centers for distribution.

EGTC has the mandate to handle energy generation, and since the project has PV and mixed energy generation, this entity needs to be in the know.

3.4 3.4 The Electricity Distribution and Supply Authority (ESDA)

The ESD will lead the DARES project implementation by creating a PIU with three dedicated environmental, Social, and Gender specialists, supported by junior staff, in order to ensure timely monitoring and reporting, country-wide. EDSA has the mandate to manage transmission and distribution activities.

Key functions of EDSA include, but are not limited to:

1. Set up a PIU unit including three E&S specialists, environmental, Social, and Gender;
2. Be responsible for the supply, distribution, and retail sale of electricity for the entire country except in areas which the Commission has issued a distribution license to another appropriately qualified entity;
3. Be responsible for dispatch and system control of electricity within its territory;
4. Establish as far as is practicable uniform standard voltages throughout its area of supply;
5. Secure the supply of electricity at reasonable prices;
6. Carry on any business usually associated with electricity distribution and supply;
7. Promote and encourage the economic and efficient use of electricity, especially for domestic, commercial, agricultural, industrial, and manufacturing purposes;
8. Perform any other function incidental or consequential to its functions under the 2011 Act.

3.5 3.5 The Electricity and Water Regulation Commission (EWRC)

The Sierra Leone Electricity and Water Regulatory Commission is established to formulate, implement, monitor quality and compliance, provide tariff guidelines, licenses

and implement regulatory frameworks for the safe, secure, affordable and reliable supply of water and electricity in Sierra Leone.

The PV and mix generation at Moyamba makes this commission very important in fixing tariffs for the energy generated.

3.6 3.6 Nuclear Safety and Radiation Protection Authority

The Nuclear Safety and Radiation Protection Authority exercises regulatory and supervisory control for the beneficial and peaceful uses of radioactive substances and their applications, including licensing, inspection, and enforcement throughout Sierra Leone, to provide adequate protection to the public, workers, and the environment against the harmful effects of radiation.

The Nuclear Safety Radiation Protection Act, 2012 prescribes the mandate and responsibilities of the Nuclear Safety and Radiation Authority (Radiation Protection Board) as a Regulatory Authority for Radiation Protection, Nuclear Safety and Security, Waste Safety, as well as ionizing and non-ionizing radiation.

The vision of the Authority is to protect people, property, and the environment against exposure to radiation that may lead to cancer and other related diseases in Sierra Leone. The Mission of the Authority is to establish the highest standard of protection compatible with requirements of the International Atomic Energy Agency (IAEA) and other international organizations against people and the environment by eliminating or minimizing to the barest minimum, the adverse effects of radiation.

The objective for which the Authority is established is to regulate, control, and supervise the uses, acquisition, importation, exportation, transportation, and disposal of radioactive substances and devices emitting ionizing and non-ionizing radiation. This makes the Authority very important for this project.

3.7 3.7 The Environment Protection Agency - Sierra Leone (EPA SL)

The Environmental Protection Agency was set up to replace the National Commission for Environment and Forestry (NaCEF), which was mandated to oversee issues related to the environment and forestry. The Environmental Protection Agency was established with a Board of Directors set up as its governing body. This Board consists of a Chairman and representatives from the various line Ministries and a Unit as stated in section 3 of Part II of the Environment Protection Agency Act. Subject to this Act, the Board shall have the control and supervision of the Agency. The Agency shall act in liaison and co-operation with government agencies to control pollution and the general protection of the environment. The Agency, subject to this Act, shall promote effective planning in the management of the environment, coordinate and monitor the implementation of Environmental instruments for the ESLEA project.

The EPA-Sierra Leone will ensure compliance with Sierra Leone environmental regulations and the World Bank ESS.

The National Protected Areas Authority (NPAA) of Sierra Leone is the government body established in 2012 to manage, protect, and conserve the country's national parks and protected areas, including their flora and fauna. It oversees key areas such as National Parks, combats illegal logging, and collaborates with Guinea on transboundary management.

Role and Missions: The NPAA exercises guardianship authority over protected areas, promotes sustainable land use and REDD+ (Reducing Emissions from Deforestation and Forest Degradation). It works to preserve forest, coastal, and marine ecosystems.

Cooperation: The NPAA collaborates with international partners, government agencies (such as the EPA), and local communities in the management of marine protected areas and in supporting the development of nature-based livelihoods.

Structure: It comprises departments for protected area management, research, law enforcement, and financial management.

4 Environmental and Social Baseline Conditions

4.1 Biophysical Environment

The country has a territory of 72,000 km2. This is home to a population of approximately 6 million, a large segment of which is concentrated in the Freetown area, with one of the region's largest and poorest urban settlements.

4.1.1 Climate and Hydrology

The climate of Sierra Leone is a monsoon-type humid tropical climate with two distinct seasons. The dry season is from November to April, and the rainy season is from May to October. The annual rainfall averages about 3,000 mm, ranging from a minimum standard of 2,000 mm in the North to a maximum of 4,000 mm in the West. The average monthly temperature ranges from 23 °C to 29 °C. Still, it can rise to an average maximum of 36 °C in the lowlands towards the end of the dry season, while in the highlands, the average monthly temperature could be as low as 150 °C at the beginning of the dry season.

The seasonality of the weather conditions described above is primarily due to the north-south movement of a zone of discontinuity often referred to as the Intertropical Front (ITF). As the belt oscillates slowly across West Africa, the country is alternately affected by southwest winds bringing moist air that often results in rains, and the northeast dry winds show temperature and rainfall data for Sierra Leone from 1900 to 2020. The mean annual rainfall from the 1970s to date is lower than before. Temperatures have risen since then, albeit with a significant drop from the late 1920s to the 1930s.

While Sierra Leone's geography, geology, and climate endow the country with a wealth of natural resources, these leave the country susceptible to natural disasters and climate change and add to prevailing fragility risks. With the second most intensive rainfall in Africa, extreme precipitation and sea-level rise are significant threats for landslides, coastal flooding and

erosion, especially given the concentration of population and economic activity in Freetown, as well as deforestation of hills and informal settlement on floodplains. The intensity of rainfall also risks damage to critical service and transport infrastructure, and variability in rainfall patterns brings vulnerabilities, as a large share (39.7 percent) of the country's installed energy capacity comes from hydropower.

4.1.2 Hydrography

Sierra Leone is divided into twelve river basins and is drained by nine major rivers and a series of minor coastal creeks and tidal streams. Five of the river basins are shared with Guinea, and two with Liberia. These rivers, which mostly originate from the Koinadugu – Kono Plateaux include the Great Scarcies (Kolenté River), Little Scarcies, Rokel (Seli River) Gbangbaia, Jong, Sewa, Waanje, Moa, and Mano. The Great Scarcies, form portions of the border with Guinea, while the Mano forms much of the country's frontier with Liberia. The river basins range in size from 5,460 square miles (14,140 square km) for the Sewa to less than 385 square miles (1,000 square km) for the smaller basins.

4.1.3 Soil Characteristics

Sierra Leone is divided into sixteen (16) Soil types, ranging from those that are well-drained and fertile to those that are poorly drained and sometimes not fertile. The Peninsula Mountain of the Western Area is the outcome of a large basic intrusion of gabbro and norite that are probably of Precambrian age. These soils are very rich in iron. Soils of the sandy beach ridges and lagoons are mostly found in the Southern coastline and belong to the Bullom Series. Soils of the Coastal Swamps are found in the salt or brackish water environment, and some are, for the most part, poorly drained. The greater part of the landscape is covered by sandy soil, and some parts by loamy soil, which experiences serious leaching during the rainy season.

4.1.4 Vegetation

Sierra Leone is within the Tropical Rain Forest Vegetation Belt of West Africa. The country has the second has the second highest rainfall in Africa. It also hosts approximately 2,700 known plant species, reflecting a high level of botanical diversity within a relatively small geographic area. Savanna woodlands of bush and grass cover 35% to 45% of the country. Swamps comprise 10% to 20% of the country, including mangroves, sedges, freshwater inland swamps, and flooded grasslands. The savannah vegetation dominates northern Sierra Leone. Forests are densest in the southeast and contain varieties of plants, including palm, mahogany, and teak. Increasing demand by the growing population for farmland and fuel wood, along with pressure from the timber industry, has resulted in a 3 % (1990-1996) annual rate of deforestation. In 1995, 18 % of the country's total land area was forested. Overgrazing of livestock, slash-and-burn, and soil erosion caused by deforestation have led to soil degradation.

The ecosystem found in the western edge of the Upper Guinean Forest ecosystem is listed on the World Wildlife Fund's (WWF's) Global 200 list of critical regions for conservation and is designated as one of Conservation International's 34 global biodiversity hotspots. It is 8th in the world in terms of plant species diversity and fifteenth in terms of plant species endemism.

Wild flora vegetation types include the lowland moist and semi-deciduous forests, part of the West Guinean lowland forests, inland valley swamps, wooded savanna, boliland, and mangrove swamps. Sierra Leone is home to approximately 2,090 known higher plant species. Common plant species include:

- Red mangrove, which grows in swamp areas along the western coast;
- Oil palm used for palm oil and palm wine;
- Cotton tree, one of which is a historical symbol of Freetown, and the
- Red iron tree.

4.1.5 Fauna

Sierra Leone's Faunal diversity is also substantial, with an estimated 204 mammal species, 583 bird species, 100 reptile species, 59 amphibian species, and approximately 683 fish species recorded across terrestrial, freshwater, and marine ecosystems. While strict national endemism is limited for most vertebrate groups, notable levels of endemism are reported for plants and freshwater fish species. A significant proportion of species across all major taxonomic groups are classified as threatened under the IUCN Red List, highlighting the importance of conservation of Sierra Leone's ecosystems.

Insects represent a major component of biodiversity in Sierra Leone. Available entomological studies indicate a high diversity of Lepidoptera alone, with more than 500 butterfly species reported from the country. However, insects are not comprehensively assessed at the national level, and only a very limited number of insect species have been evaluated under the IUCN Red List. As a result, insects are not included in the quantitative summary table, which focuses on taxonomic groups for which consolidated national-level data are available.

Table 4 : Number of species by major taxonomic group (known/endemic / threatened)[4]

Major taxonomic group	Known species	Endemic species	Threatened species (IUCN CR+EN+VU)
Mammals	204	0	22
Birds	583	0	17
Reptiles	100	0	9
Amphibians	59	1	3
Fishes	683	14	75
Plants	2,703	74	72

4.1.6 Overview of Protected Areas in Sierra Leone

According to the World Database on Protected Areas (WDPA), as accessed through the Protected Planet platform (January 2026 release), Sierra Leone has a total of 67 protected areas recorded in the global database. These sites are all spatially defined,

[4] *Species statistics by major taxonomic group were compiled using data from the IUCN Red List of Threatened Species (country search for Sierra Leone), complemented by biodiversity country profiles from the Global Biodiversity Information Facility (GBIF) and the EU Joint Research Centre's DOPA Global Biodiversity Data Viewer. Official national reports submitted under the Convention on Biological Diversity (CBD) were reviewed but do not provide a consolidated table by taxonomic group. Sources include: IUCN Red List (https://www.iucnredlist.org), GBIF (https://www.gbif.org/country/SL), DOPA (https://dopa.jrc.ec.europa.eu/gbdv/country/SL), and CBD national reports (https://www.cbd.int).*

with 100% of protected areas mapped as polygons and no point-only designations reported, allowing for a comprehensive spatial representation of the national protected area network.

In terms of designation, the WDPA indicates that the protected area system of Sierra Leone is predominantly based on national designations, with 66 nationally designated protected areas recorded. These include a large number of Forest Reserves (46 sites), complemented by National Parks (8 sites), Marine Protected Areas (4 sites), Strict Nature Reserves (3 sites), and a limited number of other categories such as Game Reserves and Non-Hunting Forest Reserves. In addition, one internationally designated site is recorded under the Ramsar Convention as a Wetland of International Importance. No regional designations or other international conservation designations are currently reported in the WDPA for Sierra Leone

With respect to IUCN management categories, the WDPA data show that most protected areas in Sierra Leone do not have an officially reported IUCN category. Specifically, approximately 89.5% of sites are listed as “Not Reported”, reflecting the absence of formal alignment or reporting of IUCN management categories at the international level. A small number of sites are reported under IUCN Category II (National Parks) and Category VI (Protected Areas with sustainable use of natural resources), but these represent a minor proportion of the national protected area portfolio

Information on governance and management responsibility is also partially reported in the WDPA for Sierra Leone. Only four protected areas are explicitly identified as being governed by a federal or national ministry or agency, while the governance type for many sites (63 protected areas) is recorded as “Not Reported”. Similarly, data on management effectiveness indicate that 11 protected areas have been subject to a management effectiveness evaluation, covering a total assessed area of approximately 398 km², which represents a very small proportion of the overall protected area system.

Overall, the WDPA profile highlights that while Sierra Leone has established an extensive network of protected areas in terms of number and spatial coverage, key attributes related to governance, management authority, IUCN categorization, and management effectiveness remain incompletely documented at the global level. The detailed list of protected areas, including their designations and available attributes, is therefore presented in annex 1 based on the WDPA January 2026 dataset.

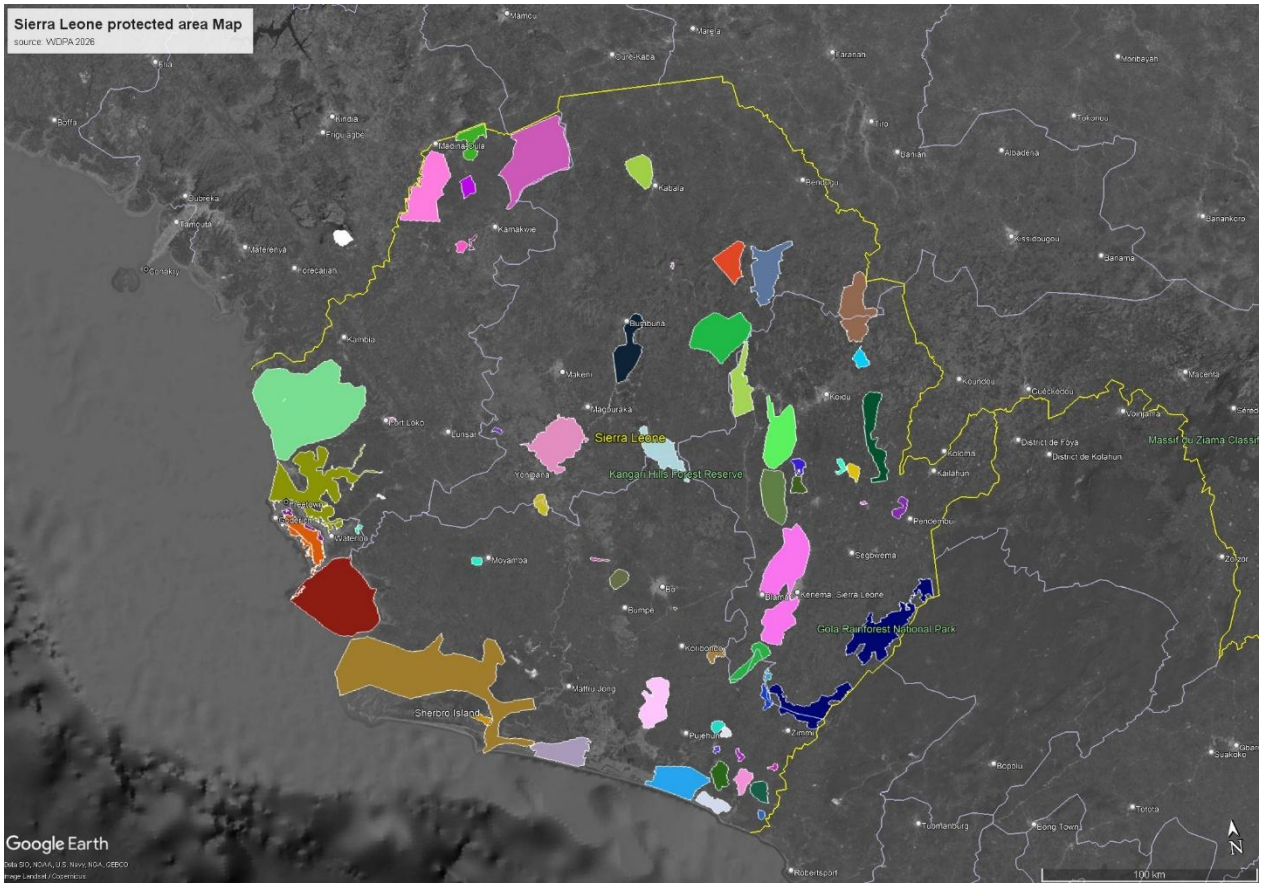

Figure 1: Sierra Leone protected area Map

4.1.7 Principal protected area

Sierra Leone's protected area network includes a number of sites of **national, regional, and international conservation importance**, reflecting the country's location within the Upper Guinean Forest biodiversity hotspot and its diverse range of terrestrial, freshwater, and coastal ecosystems. While the full list of protected areas recorded in the World Database on Protected Areas (WDPA) is presented in Annex 1, a limited number of sites stand out due to their **size, ecological significance, biodiversity values, and role in regional ecological connectivity**.

The six protected areas presented below have been selected to illustrate the **diversity of protected area types** found in Sierra Leone, including national parks, wildlife sanctuaries, and internationally recognized wetland sites. Together, these areas encompass key forest blocks, montane ecosystems, riverine habitats, and coastal wetlands that support threatened species, provide critical ecosystem services, and contribute to transboundary conservation processes within the Upper Guinean Forest region.

This focused presentation is intended to provide a **high-level understanding of the protected area context** relevant to the project, while recognizing that the majority of protected areas in Sierra Leone are designated as forest reserves and are described in detail in the annexed inventory. The information summarized for each of the six sites is based on data from the WDPA and other internationally recognized sources and is provided to support the assessment of potential risks and interactions under Environmental and Social Standard 6 (ESS6).

4.1.7.1 Outamba–Kilimi National ParkDescription

Outamba–Kilimi National Park is one of the largest and most important protected areas in Sierra Leone, located in the north-western part of the country near the border with Guinea. The park encompasses a mosaic of savannah woodlands, gallery forests, and riverine ecosystems associated with the Little Scarcies River. It supports a high level of biodiversity, including elephants, chimpanzees, hippopotamuses, and more than 260 recorded bird species. Initially designated as a game reserve, the area was officially gazetted as a national park in 1986 and remains a key site for large mammal and avifauna conservation.

4.1.7.2 Gola Rainforest National Park

Description

Gola Rainforest National Park protects one of the largest remaining blocks of Upper Guinean rainforest in West Africa. Located in south-eastern Sierra Leone along the border with Liberia, the park is internationally recognized for its exceptional biodiversity and high level of endemism. It provides habitat for threatened species such as the forest elephant, pygmy hippopotamus, chimpanzee, and numerous endemic bird species. The park also plays a critical role in regional ecological connectivity with adjacent forest reserves in Liberia and is a priority area for long-term forest conservation.

4.1.7.3 Western Area Peninsula National Park

Description

The Western Area Peninsula National Park is located immediately south and east of Freetown and protects one of the last remaining coastal forest ecosystems in Sierra Leone. The park is of high ecological importance due to its role in watershed protection, erosion control, and biodiversity conservation in a densely populated urban context. It also supports ecosystem services essential to the Greater Freetown Area, including water supply and climate regulation. Owing to its proximity to the capital, the park faces significant anthropogenic pressure but remains a focal area for conservation and environmental education.

4.1.7.4 Tiwai Island Wildlife Sanctuary

Description

Tiwai Island Wildlife Sanctuary is a small but ecologically significant protected area located on the Moa River in south-eastern Sierra Leone. Despite its limited size, the sanctuary is internationally known for its exceptional diversity of primates, including chimpanzees and several monkey species, as well as a high diversity of bird and plant species. The site is managed through a collaborative conservation model involving local communities and conservation organizations and is frequently used for research, education, and ecotourism activities.

4.1.7.5 Sierra Leone River Estuary (Ramsar Site)

Description

The Sierra Leone River Estuary is one of the most important wetland systems in West Africa and is designated as a Ramsar Site of international importance. The estuary includes extensive mangrove forests, tidal channels, and coastal wetlands that provide critical habitat for migratory waterbirds, fish spawning areas, and other aquatic species. While not a national park in the strict sense, the site plays a vital role in biodiversity conservation, fisheries productivity, and coastal protection in Sierra Leone.

4.1.7.6 Loma Mountains National Park

Description

Loma Mountains National Park encompasses the highest mountain range in Sierra Leone and protects a unique combination of montane forest, grassland, and upland ecosystems. The area is a key biodiversity site, hosting several endemic and range-restricted species, as well as important water catchments for surrounding regions. The park is also of cultural and ecological significance and contributes to climate regulation and biodiversity conservation in the northern highlands of the country.

4.1.8 Transboundary Protected Areas and Ecological Connectivity

Sierra Leone is part of a broader West African ecological landscape characterized by transboundary forest ecosystems and shared river basins, particularly within the Upper Guinean Forest biodiversity hotspot. While the country shares direct international borders only with Guinea and Liberia, several protected areas and conservation landscapes are ecologically connected across national boundaries, creating de facto transboundary conservation systems.

Along the Sierra Leone–Guinea border, a number of forest reserves and protected landscapes form continuous ecological corridors with protected areas in southeastern Guinea. Notably, the Outamba–Kilimi National Park in northern Sierra Leone is ecologically connected to forest and savannah ecosystems extending into Guinea, supporting transboundary wildlife movements, particularly for large mammals and wide-ranging species. Similarly, the Loma Mountains National Park, located near the Guinea border, forms part of a larger montane and forest complex shared with Guinea's protected highland ecosystems, contributing to regional biodiversity conservation and watershed protection.

Although Sierra Leone does not directly border Côte d'Ivoire, indirect transboundary conservation linkages exist through the Upper Guinean Forest complex, which spans Sierra Leone, Liberia, Guinea, and Côte d'Ivoire. In particular, the Gola Rainforest National Park in southeastern Sierra Leone is part of a larger forest block that extends into Liberia's protected areas, which in turn are ecologically connected to forest landscapes in western Côte d'Ivoire. These forests support regionally significant populations of threatened species, including forest elephants, chimpanzees, and other

endemic fauna, and are increasingly recognized as requiring coordinated, landscape-level conservation approaches beyond national boundaries.

From an institutional perspective, the World Database on Protected Areas (WDPA) records protected areas within Sierra Leone as nationally designated sites, with no formal transboundary protected area designations reported. However, the spatial configuration of protected areas indicates that ecological connectivity across borders is a key feature of the conservation context, particularly with Guinea and, at a regional scale, with Côte d'Ivoire through contiguous forest systems. These transboundary linkages underscore the importance of regional cooperation, information sharing, and harmonized management approaches, even where formal transboundary protected area agreements are not yet established.

Figure 2 : transboundary protected areas (sources WPDA 2026)

4.2 Human Environment/Socioeconomic

4.2.1 Demography

The population of 8,800 million (UNFPA 2025) has the fifth-lowest life expectancy globally (51 years). Population statistics, however, vary. The findings of the Sierra Leone 2021 Mid-Term Population and Housing Census of December 10, 2021, set the population at 7,548,702 citizens. The World Bank DataBank 2026 estimated to 8,642,022 the population of the country. High fertility (4.2 children), adolescent pregnancy, and child marriage perpetuate the vicious cycle of poverty and gender inequality. Youth under 35 years of age account for 75 percent of the

population, but much of this cohort spent their formative years in the decade-long war. The young population (43 percent between the ages of 0-14), poses a considerable challenge to the already high unemployment rate.

At current rates of population growth (2.2 percent), the economy will need to create 70,000 new jobs per year to maintain current employment rates and keep up with population growth. A falling dependency ratio offers an opportunity for Sierra Leone, but to exploit this opportunity, working-aged adults need to be employable—in terms of health, cognitive abilities, and skills, a gap especially in older youth cohorts (Box 1). Younger youth cohorts offer hope as they are more likely to have completed secondary education, and every year, more and more girls complete their education (albeit starting at a low base), CPF 2020.

The country remains predominantly rural, with about 56–59% of the population living in rural areas. However, urbanization is accelerating, with 41–44% living in urban areas and an annual urban growth rate of 3.2%. Freetown is the largest city, with over 1 million residents. There are no recognized or known Indigenous peoples or Sub-Saharan African historically underserved traditional local communities in Sierra Leone.

Three-quarters of male heads of household are in polygamous marriages, and 30.3 percent of women are married to a man who has one or more wives. More than a third (39 percent) of girls are married before age 18. A large share of women has a positive view of female genital mutilation; 9 in 10 girls and women have undergone it. (CPF 2020).

4.2.2 Ethnic Groups

The population of Sierra Leone is 7.5 million and is made up of an astonishing diversity of sixteen (16) ethnic groups, considering the size of the country. Sierra Leone is home to Temnes, Lokos, Korankos, Mandingoes, Susus, Limbas, Mendes, Kissis, Konos, Fullas, Vais, Yalonkas, Sherbros, Krus, Krims, and Creoles. A wide range of nationalities are also resident in Sierra Leone, contributing to growing ethnic diversity and a growing economy.
(The Permanent Mission of Sierra Leone to the United Nations, 2026, Geneva).

4.2.3 Religion

Muslims constitute about 60% of the population, Christians 30%, and traditional or animist believers make up the remaining 10%. Sierra Leone is a leading example of religious tolerance. Muslims and Christians live side by side and intermarry, and children typically learn both Muslim and Christian prayers in school. The phrase ‘God Bless Islam’ is one that you will often see written on local buses (poda podas), exemplifying the integration of the two religions. (The Permanent Mission of Sierra Leone to the United Nations, 2026, Geneva). Other sources suggest 8,2 % Muslims and 21,2 % Christians, Sierra Leone Demographic and Health Survey (2013); Muslims 80,1%, Christians 19,8 %, the rest unaffiliated (The Pew Research Center, 2025)

4.2.4 Human Capital

The human capital situation in Sierra Leone is very challenging. The population of 7.8 million has the fifth-lowest life expectancy globally (51 years). High fertility (4.2 children), adolescent pregnancy, and child marriage perpetuate the vicious cycle of poverty and gender inequality.

Youth under 35 years of age account for 75 percent of the population, but much of this cohort spent their formative years in the decade-long war. The youth bulge is therefore associated, in part, with low skills and some frustration around unmet expectations, an important source of fragility, World Bank Country Partnership Framework (CPF, 2020, FY 2021 -2026). The 2015 National Population Census reveals that 50% of the national population 15 years old and above had never gone to school. According to the 2018 SLIHS data on education, 61.3% have attended formal schools, while the remaining 38.7% have never attended school.

Human capital gaps are amplified by gender disparities in learning opportunities and outcomes, as well as low levels of safety net coverage. There is gender parity in primary school enrollment, but high drop-out rates among girls cause only 4 out of 10 girls to finish schooling, strongly influenced by teenage pregnancy. Teenage pregnancy is a major contributing factor to Sierra Leone's high maternal mortality rate, as teenage mothers have a 40- 60 percent risk of dying during childbirth. The government has launched a National Strategy for the Reduction of Teenage Pregnancy and Child Marriage (2018-2022), (CPF, 2020). Furthermore, women's economic participation has been hampered by stubbornly high rates of fertility, alongside other factors (CPF 2020). In September 2018, the government initiated the free quality education program with the aim of giving access to quality primary and secondary education to more than one million children in the country. 21% of the country's budget is allocated to this program.

Youth under 35 years of age account for 75 percent of the population, but much of this cohort spent their formative years in the decade-long war. The youth bulge is therefore associated, in part, with low skills and some frustration around unmet expectations, an important source of fragility.

Gender-based violence (GBV): GBV laws and practice often diverge: while wife-beating is illegal, 63 percent of women believe wife-beating is often justified. A GBV assessment identified the following risks: at markets, water pumps and fisheries (where sex for goods/services has been normalized, and verbal abuse and sexual harassment of female traders); at mining areas (where there is high labor influx and development partners highlighted high GBV risks); and in schools (sex-for-grades and other forms of transactional sex is common). Women and girls with disabilities experience elevated levels of discrimination, which places them at higher risk of. (CPF 2020).

4.2.5 Poverty and Growth

The country is continuing its recovery from a devastating decade-long civil war. The economy has been rebounding since the global economic downturn. Sierra Leone has also made considerable progress in infrastructure development, governance, and public sector capacity building, and better delivery of basic services, leveraging support from the international donor community. The pace of poverty reduction, however, has slowed in recent years. Poverty fell by 1.5 percentage points annually over 2003-2011 and by 0.8 percentage points over 2012-2018, reaching 56.8 percent in 2018 (Figure 2). The Gini coefficient increased from 0.33 (2011) to 0.37 (2018). Poverty remains disproportionately rural (78.5 percent), and the largest reduction occurred in urban areas outside of Freetown (by 0.9 percentage points annually over 2012-2018). The major determinants of poverty are: large household size, low education

of the household head, and employment in agriculture and non-wage employment. Furthermore, poverty rates for households with access to electricity are between 13.5 and 20.2 percentage points lower than those without electricity access. Extreme poverty in rural areas increased by 4.3 percentage points (2012-2018); and three (out of 15) districts have poverty rates above 80 percent. While the share of food-insecure Sierra Leoneans decreased from 49.8 percent to 43.7 percent (2012-2018), 3.2 million people remain food-insecure. COVID-19 will likely put additional stress on poor households due to slowing food production, shortages in food imports, and higher food prices (CPF, 2020).

The level of economic participation is similar across genders, but men have better opportunities to become wage employees than do women (by 29 percentage points), and men earn nearly three times as much as women in wage employment, holding other characteristics constant. In agriculture the average size of a male-controlled plot is 48 percent larger, women are less likely to use improved technology and have smaller yields. The share of firms with female participation in ownership is 18.8 percent (compared to 31.8 percent in SSA), although the share of firms with women in top management is at par with SSA (15.9 percent). In parliament the representation among women is low at 10 percent (SSA: 23.8 percent), (CPF, 2020).

Women's contribution to the economy is well below its potential, and fertility is constraining the possibility frontier for women (Box 2). More than a third (39 percent) of girls are married before age 18, which detracts from women's educational attainment, labor force participation, earnings and productivity as well as decision-making. Working-age women who have been teenage mothers earn on average 25 percent less than women who were not teenage mothers, suggesting that early marriage and childbearing widens the gender and socioeconomic gap in Sierra Leone. The country has a Women, Business and Law score of 63.1 points, performing below the global average of 75.2 points, and below the regional average for Sub-Saharan Africa (SSA) of 69.9 points. Most economies outperform Sierra Leone, including all economies in West Africa, except Mali (60.6) and Niger (59.4).

According to the Sierra Leone Integrated Household Survey (SLIHS), poverty remains high in the country, with the official poverty rate at 56.8% in 2018. The overall poverty rate was deducted from an extreme poverty rate of 12.9% and a food poverty rate of 54.5%. The poverty rate is especially high in rural areas (73.9%) compared to urban areas (34.8%).

4.2.6 Sources of Livelihood

The agricultural sector is the backbone of Sierra Leone's economy, comprising food crops, tree crops, fisheries, livestock, and forestry. The 2015 PHC reveals that there are 732,461 agricultural households, accounting for 57.9% of the total households in the country. Out of the 732,461 agricultural households, 85.4% are engaged in the cultivation of crops; 73.6% of those farmers are engaged in animal husbandry, and 33.6%, in fisheries.

Crops are largely produced by smallholders. The 2015 PHC reported regional household agricultural production in Metric Tons (MT), where the Northern region, with 389,996 MT (44.7%), has the highest production, followed by the Eastern region with 240,186 MT (27.6%)

and the Southern region with 235,465 MT (27.0%). The Western Area recorded the least with 6,045 MT (0.7%).

Fisheries are a valuable renewable natural resource that contributes about 10 percent of GDP, but there is unrealized potential. Fish-processing companies receiving quality fish for national and export markets is a potentially lucrative market but remains unexploited. Furthermore, illegal, unreported, and unregulated fishing activities threaten the sustainable management of fish resources.

Sierra Leone is a country rich in mineral resources, where diamonds and gold are the primary export commodities

The main challenges to productivity major productivity gains include: a costly energy mix, transport-related barriers to markets, low connectivity and technology adoption, and vulnerability of the country's infrastructure to climate change.

4.2.7 Land Ownership Structure

In Sierra Leone, land is categorized as state land, private land, or communal land. The main statutory law governing the acquisition of land in the provinces is the Provinces Land Act of 1927, Cap 122, alongside customary law. Under the customary law, at least three different types of land tenure arrangements are recognized – family tenure, communal tenure, and individual tenure. According to Renner-Thomas (2010), family tenure is the most widespread.

Customary land tenure systems are not uniform across the country and vary from one ethnic group to the other. However, in customary law, land is vested by tribal authorities who include Paramount Chiefs and their Chiefdom Councilors, who serve as custodians of the land. It is considered that land in the provinces is held by ancestors, living community members, and unborn family members (Williams, 2006). The management and preservation of the land is in the hands of the current generation, who do so in the interest of the ancestors and future generations. Much of the land has been individualized in the names of lineages, families, and individuals (Unruh and Turay 2006; Dale 2008).

Most chieftaincy land is held by extended families. Families have rights of access, use, and transfer by lease. In some areas, people from outside the chiefdom (known as "strangers") are not allowed to exclusively own land. They lease land from landowning families, and they ("strangers") pay a nominal amount of the crop yield to the family. Rights to sell chieftaincy land are generally limited to sales within the family or community. Some chieftaincy land is retained as communal land for community use (Williams, 2006; Unruh and Turay, 2006; Dale, 2008). Chieftaincy land under customary tenure can be obtained by purchase (citizens only) or lease. Private and chieftaincy land that has been individualized into family holdings can be transferred by inheritance. Land transfers of family holdings of chieftaincy land are subject to the approval of all family members and the paramount chief. Chiefs may lease communal land that has not been individualized as a family or individual holding (Unruh and Turay 2006).

Land in Sierra Leone can be compulsorily acquired by the government - the 1991 Constitution of Sierra Leone provides that no property shall be taken except where "necessary in the interests of defense, public safety, public order, public morality, public health, town and country planning," and for "promotion of public benefit or public welfare." Under such circumstances, there must be "prompt payment of adequate compensation." Constitutional protections do not apply for takings based on other legal authority, including for purposes of "carrying out . . . agricultural development or improvement which the owner or occupier of the land has been required, and without reasonable or lawful excuse refused or failed to carry out"

4.2.8 Access to Basic Social Services

Access to basic social services in Sierra Leone faces significant challenges, especially for the rural poor, with major gaps in water, sanitation, health, and education, despite post-war recovery efforts and some improvements in health/education indicators, though poverty, weak infrastructure, funding constraints, and policy coordination issues hinder equitable access, particularly for vulnerable groups like people with disabilities and the elderly.

4.2.9 Access to Electricity

Electricity access is estimated at 36 percent and is only 18 percent outside Freetown. Furthermore, poverty rates for households with access to electricity are between 13.5 and 20.2 percentage points lower than those without electricity access. Least cost modeling indicates that 30 percent of the unserved population can be reached most efficiently through DRE solutions. Thus, the Program DARES Objective 3.1 is 'Build resilient infrastructure (power, mobility, technology) for enhanced competitiveness', which recognizes the importance of increased access to electricity and improved quality of supply for improving almost every aspect of life in the country, from manufacturing (including agro-processing), mining, tourism, to education and health services.

Sierra Leone's National Energy Compact targets 78 percent electricity access by 2030, up from 36 percent today. To reach this goal, the Government plans to connect at least 720,000 households through a combined grid and DRE pathway. A substantial share of near-term gains will come from DRE solutions, mini-grids, and standalone solar, aimed at reaching at least 560,000 households by 2030, with grid densification/extension and regional power imports delivering the remainder.

4.2.10 Fragility and Conflict

The Republic of Sierra Leone is no longer classified as a Fragile State as per the World Bank's lists of states in Fragile and Conflict-affected Situations (FCS) as of FY24, FY25, and 2026. Sierra Leone emerged from a 10-year civil war in 2002 with most of its basic infrastructure in ruins, particularly in the rebel-held areas. With a CPIA* score of 3.3, the country has moved beyond the threshold of a fragile state. However, the country still exhibits characteristics of vulnerability and, in some contexts, is considered to have persistent, though improved, structural fragility.

Sierra Leone's legacy of fragility is reflected in high economic costs and social exclusion. Poverty, gender inequality, youth unemployment, and spatial inequalities–along with unequal

access to infrastructure, basic services, and jobs–all act as drivers of vulnerability. Sierra Leone's social protection system remains rudimentary, and inequality is pervasive, with stark urban vs rural and formal vs informal divides shaping the profile of exclusion. Gender inequality compounds these structural socio-economic disparities, as women from poor households and vulnerable communities face severely limited economic opportunities and endure worse human development outcomes. Gender-based violence (GBV) is not only a consequence of fragility but also a driver, and Sierra Leone continues to grapple with a high incidence of GBV.

The key drivers of fragility in Sierra Leone include, but are not limited to: Fractious political settlement, political uncertainty, and a North-South ethno-regional divide, potential instability from fiscal reform, frustrated youth, and climate change. The political polarization along ethnic lines, with a strong North-South dimension, is a key underlying basis of the struggle over resources. Patrimonial practices for jobs, contracts, and political appointments have been evident under successive administrations. The fragility legacy is an environmental and social risk to be analyzed and considered in any project preparation and implementation.

5 Identification of Environmental and Social Risks and Impacts

5.1 General

The risks and impacts identified in this ESMF are preliminary in nature. The likelihood of adverse impacts occurring is subject to risk management in each subproject. Potential risks and adverse impacts will be further assessed during the design and implementation of the subprojects. Overall, all subjects to be implemented, be they simple and small or large and complex, are likely to induce both positive and negative environmental and social impacts to a varying degree. Environmental and social impacts, by definition, imply an alteration of environmental and human conditions or the creation of new sets of adverse or beneficial environmental and social consequences caused by the action under consideration. Potential risks and impacts associated with the implementation of the project are divided into four phases of the project.

- Pre-construction phase
- Construction phase
- Operation Phase
- Decommissioning

During each phase, the project is likely to induce positive and adverse environmental and social impacts. Some of those impacts are a function of the objectives of the project, while others are a function of the way in which the sub-projects are designed to meet their objectives. A sample of benefits (positive impacts) associated with the project is presented below.

5.2 Positive Impacts

Reduced lighting costs to project beneficiaries – Electricity access will replace kerosene lamps and candles, which are expensive to operate. Kerosene is costly both for low-income households that buy it and for governments that subsidize it. In parts of Africa, for instance, kerosene costs make up 10-25% of monthly household budgets according to a report by the Lighting Africa market trends report 2013. Compared to these costs, the electricity bills seem to be significantly cheaper than using kerosene for lighting. Therefore, this project means greater savings on the part of the households of the countries in this phase.

Poverty alleviation – With more affordable and stable electricity in the otherwise off-grid areas, the beneficiaries will be engaging in income-generating activities and businesses that require power supply. Hence, improving their economic status.

Employment Creation – This Program will have a positive impact on both direct and indirect employment levels in the countries of this phase, although the bulk of them will be on a temporary basis during the construction of the infrastructure. These job opportunities will be

made available to the locals, thereby reducing unemployment in and around the construction areas. In addition, this will translate into incomes at the household level, which will be applicable to other spending and demand in the local economy.

Increase in business/commerce – Another positive impact of the project involves local material sourcing, mainly the sale of materials for use in the project. Some of these can be expected to be sourced locally, and others through importation. Project activities are therefore likely to generate new income for the local population in the harvesting and transportation of sand, ballast, and gravel, not only for project activities, but also for the upgrading of existing houses receiving electricity.

Increasing electricity access to the poor – All the countries part of this phase of the Program have a very low rate in terms of electricity access, especially in rural areas. The Program will greatly contribute to upscaling the rate of access and, at the same time, improve the livelihood of the poor population who will benefit from this electricity access, but also the farmers who will benefit from the irrigation program.

Community development programs and social inclusion – This project aims at increasing access to electricity in off-grid communities. This is in line with the tenets of social inclusion, which the World Bank defines as the process of improving the terms for individuals and groups to take part in society. Further, Social inclusion aims to empower poor and marginalized people to take advantage of burgeoning global opportunities. It ensures that people have a voice in decisions that affect their lives, and that they enjoy equal access to markets, services, and political, social, and physical spaces.

Improved health statistics with an increase in life expectancy – The use of kerosene, firewood, and candles represents health risks for the users, as reported by the World Bank report 2008 on the Welfare of Rural Electrification. The report notes that kerosene lamps emit particles that cause air pollution; these are measured by the concentration of the smallest particles per cubic meter (PM10). But these particles do not disperse, so burning a lamp for four hours can result in concentrations several times the World Health Organization standard. The health risks posed by this indoor air pollution mainly include acute lower respiratory infections, but also low birth weight, infant mortality, and pulmonary tuberculosis. Additionally, available data suggest that insufficient illumination (low light) conditions can cause some degree of eye strain, and reading in these conditions over long periods of time may have the potential to increase the development of nearsightedness (myopia) in children and adults. This project will result in many families replacing kerosene lamps for lighting with electricity, thereby reducing disease burden at the family level and on the government.

Improved education and certification in solar engineering & benefits to education – Access to electricity at the household level and in schools will create opportunities for children to study. For example, children from households with electricity have an advantage because they have more time for study and doing homework in the evening as opposed to children from households without electricity. This benefit could, towards the end, translate to better results. Additionally, children in households with electricity can also access TV and the internet, which gives them the advantage of benefiting from education programs being aired through such communication channels. Appropriate lighting through electricity will provide school-going

children in homes an opportunity to study after household chores, especially girls who must assist their mothers in preparing dinner.

Improved standard of living – The implementation of this Program will result in connecting millions of beneficiaries to off-grid electricity. Access to electricity will change the standard of living of the people as they can use domestic appliances like iron boxes, fridges, television sets, washing machines, internet, etc. Use of electricity for lighting implies that the people will not be exposed to smoke arising from the use of kerosene lamps, which predispose people to respiratory diseases.

Increase in social interactions within the campuses – There will be enhanced security in the targeted countries arising from well-lit social, commercial, and individual premises. With the implementation of the Program, the level of security will improve across the rural areas of the affected countries. This is because of more security lights, which help keep off opportunistic crimes and gender-based violence.

Communications – Access to electricity will lead to improved communication for the beneficiaries. This will be enabled by the fact that charging mobile phones will be easier and cheaper. Access also to mass media like radio, TV, and the internet will provide an opportunity for households to access a wide range of information, which is useful for decision-making. Some of the information beneficiaries receive include information on markets, farm inputs, livestock & crop management and local affairs, nutrition, diseases, investments, and entertainment, among others.

Gender Considerations – Electricity is a basic service, especially for lighting, but is still a luxury for many rural women and men. Access to modern electricity will go a long way towards alleviating the daily household burdens of women, giving them more time, improving their health and enhancing their livelihoods. Available literature on gender and energy suggests that providing electricity to communities and homes will promote gender equality, women's empowerment, and women's and girls' access to education, health care, and employment. Indeed, most gender benefits of the project will occur because women tend to spend more time at home, are responsible for household chores that can be carried out more productively with electricity, and because certain tasks are culturally defined as women's work.

Employment – In many countries, electrification is linked to an increase in women's employment. The time savings delivered by electric power and the ability to carry out domestic activities in the evening due to lighting free up women's time to participate in paid work.

Gender Norms and Women's Agency – Energy access projects can also shape new community decision-making and leadership models, for example, if local electrification committees are set up, women and men can be given equal opportunities to run for key positions to voice community priorities and realities, thereby increasing women's voice in decision-making. Additionally, electrification can help to increase safety through public lighting, which is particularly important for the socio-physical mobility of women and girls.[5]

[5] Taken from: Schomer, I. et al. January 2017 (Conference Edition). Mini-Grids and Gender Equality: Inclusive design, better

5.3 Adverse Impacts

The environmental risk associated with off-grid solar electricity is rated as moderate because solar energy is promoted as a green alternative for the environment, one that harnesses free and bountiful energy from the sun. However, solar energy comes with its own environmental challenges regarding land use, water consumption, emissions, and the use of hazardous materials. Based on the nature of the proposed project and the kind of off-grid solar system, the main impacts will be on the impact of hazardous waste materials (spent batteries), but other potentially adverse impacts should be addressed. Below are the major environmental and social impacts associated with the general construction activities, as well as the operation of power distribution lines.

Air Emissions – Construction activities are usually associated with the release of fugitive particulate matter (PM) generated from land clearing, excavation and movement of earth materials, cut and fill operations, contact of construction machinery with bare soil, and exposure of bare soil and soil piles to wind. The use of construction equipment and power generators is expected to release exhaust-related pollutants such as carbon monoxide (CO), nitrogen oxides (NOx), sulfur oxides (SOx), particulate matter (PM), and hydrocarbons (HCs). Air emissions during the project construction phases tend to be confined to the immediate vicinity of the construction site.

Noise – During construction activities, noise may be caused by the operation of pile drivers and demolition machines, earth-moving and excavation equipment, generators, and concrete mixers. The increased noise level will impact construction workers and nearby residential areas. Nevertheless, the latter impact will be limited to the works' implementation phase and will cease when the work is complete. Unusual humming noise from transformers may also occur due to the weakening of core stampings and clamping of external fittings. Minor noise pollution may result from the operations of Boom trucks used to mount distribution transformers.

Waste – ***Solid Waste***: Some amount of waste materials, including cleared solid waste debris, backfill earthwork, obsolete transformer, and other construction wastes, will be generated during the construction period.

Liquid Wastes: These include non-hazardous operational waste, construction sites, e.g., lubes, lubricants, sanitary water, paints, etc.

Gaseous waste: These include combustion products from construction engines, welding gas, natural gas leaks, etc.

***Hazardous waste*:** Any gaseous, liquid, or solid, which, due to quantity, physical, chemical, or infectious characteristic, has the potential to harm human health, the environment when improperly handled, stored, disposed, transported, or treated.

development outcomes. ESMAP. Washington D.C.: World Bank Group
https://www.climateinvestmentfunds.org/sites/default/files/mini-grids_and_gender_equality.pdf

Used batteries: The disposal of lead-acid batteries and lithium batteries used in mini-grids will present a challenge for the project's long-term sustainability.[6] Likewise, the disposal of used solar panels may also present a risk in the longer term. Additionally, the photovoltaic cell manufacturing process includes some hazardous materials that need to be handled and disposed of properly. These materials could pose serious environmental or public health threats related to the disposal of end-of-life batteries containing hazardous materials. Proper disposal or recycling of spent battery energy storage systems at the end of their life, which is usually 3-5 years, is the main concern. Currently, there are no specific hazardous waste disposal procedures/sites in Sierra Leone for the disposal of end-of-life batteries, but there are firms in other African countries that collect and export spent batteries for recycling.

Water Quality – Surface water pollution may result from uncontrolled discharges into rivers or seawater, accidental spills of oil, runoff, erosion, and sediment transport. The latter impact is particularly significant when construction activities occur within or in proximity to surface water, such as in the case of the construction of hydropower structures construction of heavy fuel oil supply facilities on the coastal strip. Polluted water flowing into surface water bodies could impact the aquatic organisms and affect the quality of life of downstream users when river waters are involved. Groundwater contamination may occur from percolation of oil and lubricants in soil. Nevertheless, waters disturbed by construction activities are likely to recover when sediment is controlled, and natural processes are permitted to replenish stream life.

Soil – During construction activities, soil erosion may be caused by exposure of soil surfaces to rain and wind during site clearing, earth moving, and excavation activities. Improper grading of plant and sub-station sites and tower locations may also cause drainage and erosion problems. The resulting soil particles may be transported into surface drainage networks, thus affecting the quality of natural water systems and ultimately the biological systems using the waters. Water may accumulate in excavated pits, potentially leading to the breeding of insects and other infectious organisms. An accidental spill of oil or lubricant may infiltrate soil and enter surface or groundwater. Soil contamination resulting from oil leakages through the joints of power transformers may occur due to defective packing and improper tightening.

Flora and Fauna – Stream pollution by sediments from construction activities often consists of suspended and settleable solid particles that may coat, bury, suffocate, or abrade living organisms such as eggs, larvae, fish, etc. Many aquatic invertebrates and fish may change population density and community composition if high concentrations of suspended solids are encountered. Aquatic vegetation may be adversely affected by a reduction in photosynthesis due to high turbidity. Dredging may also increase turbidity and sediment load and reintroduce into suspension bottom sludge, trapping toxic precipitates. The toxic sludge may be ingested or concentrated in marine plant and animal species and biologically magnified in food chains. Detonations from blasting for in-stream foundation excavations may produce underwater shock waves, potentially injuring or killing fish in the sphere of influence.

[6] This will present an issue once batteries reach their recycling age. It has been estimated that should Sierra Leone reach its target of installing 30,000 MW of solar PV by 2030, about 280 million used batteries will end up needing disposal/ recycling (assuming average battery life of 3 years).

The establishment of mini-grids may induce land acquisition. Likewise, the construction of local business offices and customer service centers may require the clearing of trees and vegetation for new sites that are not within existing substations. Therefore, construction activities, particularly for the district offices, may result in loss of vegetation and plant cover, disturbance of fauna habitats, weakening and degradation of soils, disturbance of the natural landscape and morphology. Thus, the adequate selection of the location of offices or customer service centers may reduce potentially adverse environmental and social impacts.

Traffic – The main impact on road traffic will be during the movement of distribution materials and equipment from the Port of Freetown to the contractors' warehouses and from the warehouses to the various sites. Clearing of solid waste debris and cutting and filling of sites for the district offices may cause some traffic, but the impact would be minimal.

Health and Safety – Both occupational health and safety as well as community health and safety issues may arise during the construction phases of the project (which include health and safety risks from the construction of new buildings for district offices and customer centers. Especially if the community's access to the worksite is not controlled. People may be injured by construction machinery or may come into contact with live wires/equipment in communities that already have electricity. This includes GBV and SEA/SH risks as well as the usual construction-related EHS risks. The impact of worker exposure to Mpox during construction work could potentially be significant, but the likelihood of such an occurrence would be seldom if the correct procedures and mitigation measures are applied and followed. During the installation of meters, the contractor's workforce interacts with customers, hence posing risks to both workers and the customers. Although there is public and scientific concern over the potential health effects associated with exposure to electromagnetic fields (EMF), no empirical data demonstrates adverse health effects from exposure to typical EMF levels from power transmission lines and equipment. However, while the evidence of adverse health risks is weak, it is still sufficient to warrant limited concern (World Bank 2007, Development Report). Fire hazards may also occur due to the ignition of insulating oil in the distribution transformer units.

Land Use – The project will require the installation of solar power stations of various sizes and mini power grids on rooftops or on poles next to the users' homes or buildings. Those processes will induce temporary or long-term land acquisition. The distribution lines may also interfere with the existing land use/land users. For instance, some existing tree crops and other livelihood sources within the right-of-way may be affected during the construction of distribution lines. Additionally, the construction of investors/contractors' offices and/or customer connection centers may necessitate the acquisition of lands and is therefore potentially associated with social problems such as the loss of houses and structures on the land, loss of access to common resources and facilities, and the potential change in the livelihoods of the communities that lived on the land or used it for cultivation. The installation and operation of distribution systems may result in the depreciation of the price of immediately adjacent lands and properties.

Socio-Economic Impacts – Although the construction phase will generate several short-term job opportunities for the local people, negative implications on the socio-economics may occur as a result of potential loss of land use (though very unlikely), interruptions to means of

livelihood, disturbances to cultural resources, influx of workers, child labor, and/or forced labor.

The increased availability of power supply in areas facing electricity shortage and/or absence of supply will open up the latter areas for new settlements, give rise to the value of land and properties, population influx, which, if not properly managed, may put pressure on existing resources and infrastructure, and also expose residents to Sexually Transmitted Infections and Diseases, including Mpox and local inflation. On the other hand, the availability of power supply promotes economic development and improves the standard of living and well-being of residents.

Physical Cultural Resources – Improperly sited projects can damage physical cultural resources and diminish their value. Moreover, unregulated and careless excavation works may destroy potential buried archaeological remains. Damage to physical cultural resources constitutes a threat to social cohesion and eliminates the potential for their use in tourism. If properly planned and sited, developments related to the distribution components will have no impact on the country's physical cultural resources. However, to mitigate impacts on any cultural heritage that may be discovered during excavation and other civil works, a Chance Finds Procedure will be applied (see Annex 15: 19). Below are two tables summarizing potential adverse environmental and social impacts identified by project phase and per project component, and role and responsibilities for mitigation measures.

Table 5: Potentially Adverse Environmental and Social Impacts by Project Phase

Project Phase	Potential Impact Source	Potential Impact
Pre-construction	Waste from cleared vegetation	Depletion of landfill resources; Air pollution and climate change effects; Sedimentation and soil erosion, Disruption of waterways and drainage corridors
	Impacts on vegetation and wetlands during opening of access roads, trenches and lines	Loss of vegetation Soil disturbance and runoff Loss of habitats and fauna
	Land acquisition from members of the communities before the construction phase. Destruction of structures, economic trees, and cash crops	Negative perception and discontent expressed by members of the community. Loss of people's properties and farmlands; Decrease in accruable income. Hostile and unfriendly community attitudes. Unresolved issues with land acquisition extending into the construction phase.
	Gender based violence/Sexual exploitation and abuse/Sexual harassment (GBV/SEA/SH)	Labor influx Lack of consultation and awareness regarding affected communities' customs and rules to workers

Project Phase	Potential Impact Source	Potential Impact
		Separate toilets between men and women Degraded physical and emotional health of those who have experienced it. Acute injuries and chronic pain Gynecological problems, depression, trauma, and substance abuse. Limit access to educational and economic opportunities Early marriage and adverse experience Fear of physical or sexual abuse leads to high school dropout rates Curtailing of educational advancement and future economic opportunities Stigma and rejection associated with rape and other forms of sexual abuse
Construction Phase, including civil, mechanical, and electrical works and installation of PV panels and associated components	Excavation, grading, compaction, filling, and other civil works.	Excavation and compaction activities through construction works will alter the soil properties, including loss of valuable top soils
	Construction waste generation and disposal, including excavated soil, general refuse, garbage, inert construction materials, metal scraps/ electronic waste, concrete	Depletion of landfill resources Air pollution and climate change effects Sedimentation and soil erosion

Project Phase	Potential Impact Source	Potential Impact
	waste, food waste, and used packaging materials	Disruption of waterways and drainage corridors Improper disposal of Scrap metals could leak toxins like lead, mercury, and arsenic into the soil and water supply, harming plants, animals, and humans alike
	Construction activities on or near agricultural lands/pastures are impacting land use	Loss of agricultural land (arable land), pastures, or orchards if not properly managed air pollution due to the emission of particulate matter, nitrogen oxides, and volatile organic compounds.
	Air pollution from fugitive dust and emissions from construction vehicles, plants, and equipment. Dust is generated by excavation and earth-moving operations. Exhaust emissions occur from poor maintenance of plant and equipment or over-revving of engines	Impairment in the health of local residents of the community, especially cases of respiratory infection and respiratory disease symptoms. Incidence of ocular disease symptoms. Presence of suspended particulates exceeding acceptable limits Complaints from members of the community. Nuisance to residents and other sensitive receptors Indirect effects on the surrounding population and ecosystems
	Noise and Vibration from construction activities	Complaints of disturbance from members of the community. Damages to structures overtime as a result of the vibration caused by the heavy machinery.
	Toxicity to aquatic life resulting from spills of chemicals and hazardous materials during	Contamination of local waterways may cause harm to plants, fish, and wildlife, and degrade water quality and quantity.

Project Phase	Potential Impact Source	Potential Impact
	construction activities that reach the stream through surface loss	
	Disruption of infrastructure functioning in the community near the project areas	Community health and safety at risk from infrastructure updating and expansion, including potential for loss of water, electricity, and access to roads
	Gender based violence/Sexual exploitation and abuse/Sexual harassment (GBV/SEA/SH due to labor influx)	Complaints of violations from members of the community. Degraded physical and emotional health of those who have experienced it. Acute injuries and chronic pain, Gynecological problems, depression, trauma, and substance abuse. Limit access to educational and economic opportunities, Early marriage and adverse experience Fear of physical or sexual abuse lead to high school dropout rates, Curtailing of educational advancement and future economic opportunities. Stigma and rejection associated with rape and other forms of sexual abuse.
	Water Quality changes resulting from construction works, seepage of fuel from powered machinery into the watershed, discharge of	Change in the water color. Change in pH levels. Eutrophication

Project Phase	Potential Impact Source	Potential Impact
	untreated effluent into water bodies, or effluent from workers in the campsites.	Increased cases of disease, illnesses (especially waterborne diseases) Smell Alteration of aquatic life.
	Impact on flora and fauna resulting from mobilization of equipment and construction activities, etc. Weed invasion/ proliferation of opportunistic species (weeds & pests)	Reduction of the richness in the number of available living species, including protozoans Reduction in the number of native wildlife. Alteration of various forms of plant and animal life Presence of Wildlife species within community dwellings and corridors.
	Transportation & Traffic Impact: Existing travel patterns will be negatively impacted during the construction phase of the project in the states.	Complaints from members of the community. Increase in noise and air pollution. Increase in roadside hazards and accidents.
	Accidents occurring during the construction phase as a result of increased vehicular movements.	Increase in total number of accidents during the construction phase.
	Increased crime rates,	Crime rate and disputes amongst members of the communities. Including Sexual Abuse and Exploitation and Sexual Harassment (SEA/SH)

Project Phase	Potential Impact Source	Potential Impact
	Social Stress & Disruption Impact Source: • labor influx is used for civil work activities. • Human Governance. (Corrupt practices)	A collapse of the Laws, rules, and norms within the community. Increased anti-social behavior.
	Human Displacement Impact Sources including: Civil works	Relocation of people and their livelihoods
	Archeological & Cultural Loss Impact Sources	Loss of valuable archaeological and historical artifacts Complaints from members of the community
	Aesthetics Impact Source: Construction works.	Diminished aesthetic levels.

Table 6: Role and responsibilities by component and phase

Operational Phase	Roles and responsibilities (EDSA and private sector)		
	EDSA	Private sector	Other key stakeholders
Component 1: Solar Mini grids			
Setting applicable E&S requirements	Sets applicable E&S requirements and includes them in the grant application process for mini grid developers (including applying (a) Exclusion Criteria for Mini-Grid Developers, SHS Companies, and Contractors and (b) Exclusion Criteria for Mini-Grid and Power Generation Sites). Requires mini grid developers to prepare ESIAs to manage E&S risks across subprojects, each developer will design and implement. Integrates E&S requirements in legal agreements with mini-grid developers.	Mini grid developers incorporate applicable E&S requirements in their ESIAs to manage E&S risk consistently in subprojects. In line with ESS9, all DRE companies must have E&S management plans in place that are in line with the RFMs ESMS and the ESF requirements	N/A
Screening for E&S risks and impacts	Validates / verifies developers' process and risk categorization	Determine key E&S risks and impacts of individual mini grids, apply Exclusion Criteria for Mini-Grid and Power Generation Sites, and assign E&S risk category (I or II)7. Any subproject requiring	N/A

[7] Corresponding to high or medium / low risk.

Operational Phase	Roles and responsibilities (EDSA and private sector)		
	EDSA	Private sector	Other key stakeholders
		resettlement must be category I. Submits a list of category I sites to EDSA before construction for verification.	
E&S due diligence and risk management	Conducts site visits for all category I mini grids and for a sample selection of category II mini grids.	Prepare and integrate into design: For category I, ESIA, as well as Livelihood Restoration Plan (LRP), as required. For category II, ESMP For both, Stakeholder Engagement Plan (SEP) and the grievance mechanism	World Bank reviews and provides clearance for ESIAs,8 and LRPs as required. Ministry of Environment (FMoE) provides environmental clearance, as required
Monitoring	Conducts monitoring activities during mini grid construction and operation (sample, risk-based checks, and site visits)	Conduct self-monitoring activities in line with their ESIAS, and maintain monitoring records	Communities participate in monitoring, as per SEP.
Reporting	Reviews annual E&S reports from developers and conducts follow-ups. Maintains records of developer screening, ESIAs, ESMPs, LRPs, and other relevant documents	Prepare annual E&S reports to EDSA. Report any incidents or accidents within several days of occurrence	N/A

[8] First several ESIAs to ensure quality and consistency.

Operational Phase	Roles and responsibilities (EDSA and private sector)		
	EDSA	Private sector	Other key stakeholders
Independent E&S audit	Engages an independent E&S auditor	Provide all relevant reports and documents to the independent E&S auditor	Independent E&S auditor conducts annual review of developers' E&S performance.
Component 2: Standalone Solar Systems for Homes, Enterprises, and Farms			
SHS company grant application	Incorporates E&S requirements (clean track E&S record, applies Exclusion Criteria for Min-Grid Developers, SHS Companies, and Contractors) into application and grant agreements. Conducts a review of companies' SHS. Engage with EPA, through MOE on the handling and disposal of used batteries, panels and electronic wastes.	SHS companies prepare elements required for ESIAs in line with EDSA's requirements. Submit a statement of current practice for battery disposal/ recycling	EPA
SHS company operations	Conducts sample performance checks, as needed	Remain in good compliance with all relevant requirements. Participate in battery disposal/recycling program	N/A
Monitoring	Oversees (under TOR for general monitoring of SHS companies) monitoring E&S compliance by an independent company.	Conduct self-monitoring, provide relevant documentation	N/A
Monitoring	Monitors contractor E&S performance before and during construction	Self-monitors against ESMPs	PIU in the monitoring process
Independent Verification Agent	Engages an independent E&S Verification Agent	Provide all relevant reports and documents to the independent E&S auditor	PIU

5.3.1 Identification of Potential E&S Risks and Impacts by Project Component

Land acquisition, SEA/SH, and battery waste are three issues that are likely to constitute critical, recurrent, and systemic E&S risks throughout the project. Land acquisition will be acquired through a willing buyer, willing seller agreement. Such agreements will be verified against land market prices or relevant methodologies if active land acquisition markets do not exist. However, there may be issues with voluntary land donation practices that do not comply with ESS5 requirements, particularly due to documentation. SEA/SH risks are inherently associated with the local influx of workers, who will sooner or later satisfy their sexual needs where they happen to occur. Inappropriate waste management of used batteries transpires as a short-term and medium-term risk, and possibly also a long-term risk with adverse impacts. These three risks are likely to manifest prominently and frequently across many subproject sites to be developed and implemented by the private sector. Stakeholder engagement has been identified as a key to managing not only the three risks, but also other potential E&S risks.

Table 7: Key Environmental and Social Risks by Project Component

Component/ risk issue	1. Solar Hybrid Mini grids for Rural Economic Development	2. Standalone Solar Systems for Homes, Enterprises, and Farms	3 Power Systems for Interconnected Mini grids/Mesh grids
1. Land acquisition/ resettlement	It is expected that land will be acquired for mini grid sites using the following options: Purchase, Lease, or Voluntary Land Donation / VLD[9] (from individuals, families, or communities). Involuntary resettlement in the form of economic displacement is likely (e.g., cutting of economic trees). During stakeholder consultations, it was reported that communities are likely to appreciate the mini grid sub-projects and may offer to voluntarily donate land as required; nevertheless, the risk remains that people may be displaced, and land use changed, especially in unforeseen situations. In addition, it is not inconceivable that land donors may change their minds about donations, or pressure may be brought to bear on people to donate land against their will. As such, VLD by communities to mini-grid developers will not be	Not expected for this component.	Major risk is expected to be encroachment on land that may be used for interconnected mini-grids, which are allocated and traditionally used by communities. The main concern would be EDSA's capacity for conducting stakeholder engagement and LRPs, where needed.

[9] *Voluntary land donation is strictly defined in international practice as the ceding of a property by an owner who is: a) fully informed; and b) can exercise free will, i.e., can refuse to sell or to donate. "Fully informed" means that the owner has complete information regarding the proposed activity and its impacts, its land requirements, and its alternate activity sites, as well as his or her rights to compensation. The owner has also been provided with sufficient time to consider his or her disposition of the property, and the owner has knowingly rejected the right to renege on his or her initial decision. "Free will" means that the owner can reject the possibility of giving up his or her land.*

Component/ risk issue	1. Solar Hybrid Mini grids for Rural Economic Development	2. Standalone Solar Systems for Homes, Enterprises, and Farms	3 Power Systems for Interconnected Mini grids/Mesh grids
	encouraged except (a) it meets the criteria set out in the VLD guidelines (Annex 15.10) and (b) the process is verified and approved by the EDSA prior to finalization of the donation.		
2. Waste management	Risks associated with the disposal of lead-acid batteries and lithium batteries used in mini-grids will present a challenge for the project's long-term sustainability.[10] Disposal of used solar panels may also present a risk in the longer term. Poor OHS practices exist among developers, although not expected to be high among international developers. There is a risk of poor OHS practices among Engineering, Procurement, and Construction (EPC) contractors. It must be ensured that labor conditions comply with national laws regulation and the LMP included in the POM.	Waste generation from solar panel installation include cardboard, plastic wrap, and wooden pallets from transporting panels and components; some construction debris (concrete, wiring and mounting structures). Long-term implications of the	Same as component 1.

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Component/ risk issue	1. Solar Hybrid Mini grids for Rural Economic Development	2. Standalone Solar Systems for Homes, Enterprises, and Farms	3 Power Systems for Interconnected Mini grids/Mesh grids
	Waste generation from solar panel installation includes cardboard, plastic wrap, and wooden pallets from transporting panels and components; some construction debris (concrete, wiring and mounting structures).	increased number of energy storage units (mostly containing lithium-ion batteries). This impact requires a strategic solution at country and regional levels, and EDSA will be requested to put in place a program for battery disposal/recycling, in which SHS distributors will play a role.	
3. Labor and working conditions	Poor OHS practices exist among developers, although not expected to be high among international developers. There is a risk of poor OHS practices among engineering, procurement, and construction (EPC) contractors. It must be ensured that labor conditions comply with national laws and the LMP.	Labor and working conditions practices are generally adequate and shall be maintained. Weak labor practices (e.g., use of child labor) may be possible but not	There is a risk of poor OHS practices among EPC contractors. It must be ensured that labor conditions comply with Sierra Leone regulations and international good practice.

Component/ risk issue	1. Solar Hybrid Mini grids for Rural Economic Development	2. Standalone Solar Systems for Homes, Enterprises, and Farms	3 Power Systems for Interconnected Mini grids/Mesh grids
		expected to be frequent or severe.	
4. Community health and safety issues	General construction impacts, as well as moderate labor influx, can be expected and may be associated with security and SEA/SH risks.	The installation of SHS generally has a low risk of community health and safety concerns, but the presence of workers with money to burn raises concerns.	Same as component 1.
4. Biodiversity impacts	Bird and bat mortality is noted as a possible risk due to the perception of solar panels as water bodies (collisions). Due to the small size of mini-grids, this risk is not expected to be high. Impacts on sensitive natural habitats are possible where mini-grids are constructed in such areas. Initial screening done through electricity demand surveys indicates this is not to be a frequent case.	Not expected.	Bird and bat mortality is noted as a possible risk due to the perception of solar panels as water bodies (collisions).
5. Resource consumption (water)	Stress on local water use and supply is possible due to the irrigation support to be granted to	Not expected.	Same as component 1.

Component/ risk issue	1. Solar Hybrid Mini grids for Rural Economic Development	2. Standalone Solar Systems for Homes, Enterprises, and Farms	3 Power Systems for Interconnected Mini grids/Mesh grids
	agricultural activities and the need to wash solar panels frequently.		

5.4 Estimated Probability and Severity of E&S Risks and Impacts

The potential negative E&S impacts associated with the sub-projects are summarized in Table 7. Beyond the mitigation measures discussed below, it will be important to adopt waste management principles (Source reduction, reuse, and recycling) at all times so as to meet the World Bank-relevant ESS, including: 1, , 3, 4, 6.

Table 8: Potential E&S Risks, Impacts, and Magnitude Relative to Project Components 1 & 2

Environmental Receptor/ Medium	Comment	Impact Indicators	Impact Level
Physical			
Air	Ambient air quality within the Project site and the surrounding environment	Increase in concentration of gaseous and particulate pollutants	Moderate to low
Soil	Soil environment within the Project site and its Area of Influence (AoI)	Changes in physical, chemical, and biological properties of the soil; loss of soil ecology and fertility; soil erosion, etc.	Moderate to low
Groundwater/ aquifers	Underground water resources in the Project's AoI	Decrease in underground water/aquifer reservoir level; groundwater contamination	Moderate to low
Landscape/ topography	The geomorphological landforms and terrain of the Project site and its surrounding environment	Alteration in drainage pattern; changes in landscape	Moderate to low
Biological			
Terrestrial flora and habitats	Plant species (vegetation) within the Project site and its AoI	Loss of terrestrial flora; introduction of new species	Moderate
Terrestrial fauna	Terrestrial fauna within the Project site and its	Loss of terrestrial fauna; involuntary migration	Moderate

Environmental Receptor/ Medium	Comment	Impact Indicators	Impact Level
	surrounding environment		
Waste			
Battery disposal	End-of-life battery disposal remains the major risk	OHS impacts on workers handling battery recycling, uncertified facilities, and inadequate waste disposal and recycling practices	High
Socio-economic Environment			
Land use	Existing land use within the Project site and its AoI	Changes to the existing land ownership/tenure arrangements	Moderate
Willing-buyer, willing-seller agreements	These agreements will be checked ex-post, and there may be a risk of the price market not being duly identified or pressure on landowners to sell.	i) Relevant methodologies are used to identify market prices and to propose a relevant land acquisition cost when markets do not exist. ii) Methodologies are included in the POM of the Project.	Substantial
Land acquisition – Voluntary land donation (VLD)	Land donation is authorized by ESS5 and submitted to a series of conditions. Land donation will certainly not be the preferred option for land acquisition, but it may be relevant in certain scenarios. For instance, community-scale water and irrigation micro-infrastructure where land needs	i) ESS5 conditions are met, including: (a) donors are appropriately informed and consulted; (b) refusal is an option and donors confirm in writing; (c) the donated area is minor and does not reduce the donor's remaining land below what is needed to maintain livelihoods at current levels; (d) there is no household relocation; (e) the donor directly benefits from the project; and (f) for	Moderate

Environmental Receptor/ Medium	Comment	Impact Indicators	Impact Level
	are tiny and benefits are direct. Another example is small pads for anchor stays, where the use of the plot is not impaired, and the household receives upgraded service.	community/collective land, all users/occupants consent. ii) Transparent records must be kept of consultations and agreements VLD requires prior Bank approval -as per ESS5	
Visual impacts	The aesthetic quality of the Power Plant in the surrounding visual catchment	The compatibility of the Power Plant with the character of the locality, visual nuisance through the reflection of panels	Moderate
Utilities	The existing utilities (e.g., power supply, water, sewer services, etc.) in the Project's AoI	Changes in existing utilities; potential damage to public utilities	Moderate
Infrastructure	The existing infrastructure, such as roads, waste handling facilities, etc., within the Project's AoI	Potential damage to road infrastructure; road traffic and accidents; increased pressure on waste management facilities	Moderate
Employment/ income	The employment situation in the Project's AoI	Opportunities for local employment; changes in income level	Moderate
General public/ project communities	Labor influx grievances, and SEA/SH.	Increase in the demand for basic services due to a temporary local influx of workers. Increased crime (including prostitution [SEA/SH], theft, and substance abuse) is expected to increase in the proposed sub-project areas as	Moderate

Environmental Receptor/ Medium	Comment	Impact Indicators	Impact Level
		the influx of workers increases. Increased risk of communicable diseases, including STIs and Mpox. Increased safety, security incidents, and accidents.	
Other (Health and Safety)			
Construction workers	Health and safety of construction workers.	Accident, injury, fatality, exposure to nuisance (dust, noise), fire, etc.	Moderate
Workplace health and safety	Health and safety of employees involved in the Power Plant operation. Safety air traffic when a plant is near an airport.	Safety and security incidents, accidents, injury, fire, explosion, etc.	Moderate to substantial
General public/ communities	Health and safety of the general public	Safety and security incidents and accidents, fire, explosion, (construction camps), etc.	Moderate

5.4.1 Capacity Assessment of Key Project Implementers

Specific E&S risks for each project component are mainly linked to processes and the capacity of key stakeholders for E&S risk management. Capacity assessment aspects that may contribute to risks for each component are presented in Table 11.

Table 9 : Identifying E&S Risks Due to Low E&S Management Capacity

Component 1	Key stakeholders	Capacity and Risks
Solar Hybrid Mini grids for Rural Economic Development	Mini grid developers	Mini grid developers are at varying levels of capacity regarding E&S standards that they are applying to prepare their projects. International companies, especially those that receive funding from development agencies (e.g., GIZ), are more compliant with the E&S requirements that come with the funding. However, domestic mini-grid developers are relatively unaware of such requirements and will need major effort in building their capacity to comply with the World

Component 1	Key stakeholders	Capacity and Risks
		Bank requirements that EDSA will need to implement as part of the program. Differences in how developers approach site selection and interactions with communities must be bridged to ensure that communities can consistently benefit from electricity provision in an inclusive and sustainable manner. These range from full engagement, securing broad community support, reaching agreements with communities on how land would be acquired for the mini grids, and proactively conducting LRPs and ESIAs as part of project design, to full reliance on the government processes for land expropriation and no E&S studies or exploring alternative site locations to reduce potential E&S risks and impacts.
1.2 Standalone Solar Systems for Homes, Enterprises, and Farms.	SHS companies/distributors	The core issue with the SHS component is the potential long-term impacts of the increased number of energy storage units (containing batteries) that need to be recycled. Further, labor and OHS practices of SHS companies must comply with the Sierra Leone laws and World Bank EHS guidelines and good practices.
Management of E&S Impacts	PIU	E&S capacity is weak in Liberia and there is a need to hire experienced E&S Specialists both at the level of the RCU and the PIU to make sure environmental and social issues are well managed by the contractors.

To ensure that private sector is adequately equipped to fulfill its role in E&S assessment and risk management for the project, PIU shall provide guidance and support to the private sector in the form of (i) assistance with developing internal E&S systems and capacity, including training; (ii) required adequate reporting from companies engaged; (iii) risk-based oversight function that will help allocate PIU's resources for review, monitoring, and supervision. The PIU will ensure that the budget is available for these activities.

Given the development of mini-grid solar systems and standalone solar systems for households, and the low capacity of waste management, both in terms of regulations and recycling facilities in Sierra Leone and other countries, there is a need to develop efficient laws

and regulations, and also equip countries with up-to-standard facilities to manage the waste from panels and battery systems.

6 PROPOSED IMPACT MITIGATION MEASURES

The potential adverse environmental risks and impacts identified are not expected to be large-scale, permanent, or irreversible. They are manageable and expected to be temporary, site-specific, and limited in scope.

The mitigation measures proposed in this ESMF seek to address adverse physical and socio-economic impacts. They are intended to reduce or eliminate, to the extent possible, potential adverse E&S impacts of project activities. It should be noted that the mitigation measures referred to are generic, as sub-project activities and sites are yet to be known . Site-specific mitigation measures will be assessed as part of the construction works to be carried out by contractors under the respective project. The bidding documents will be reviewed to ensure that the E&S recommendations set forth herein are included in the overall price of the work and are implemented. When sub-projects and their sites have been defined, the ESMF shall be updated to include sub-projects' sites, specific mitigation measures, and their estimated costs. Those measures and costs shall be incorporated in the subproject-specific ESIAs and EMPs. For any changes/updates made to this ESMF, the same approval and disclosure protocols will be followed for the updated one.

6.1 Physical Mitigation Measures

Physical mitigation measures relate to issues such as the project site, re-vegetation, and include preventive measures such as bush clearing, erosion, sedimentation, and pollution control, good construction/farming practices, waste management, and the application of Environmental Guidelines for Contractors. Below are three mitigation measures seeking to address key impacts of the project.

Climate Change - Sierra Leone emits less than 0.02 percent of the global share of anthropogenic greenhouse gases (GHGs), (World Bank Group Country Climate and Development Report, 2025). However, its position as one of the smallest emitters is contrasted by its being among the countries most vulnerable to climate change. At the same time, unmanaged growth could further degrade the environment, intensifying future climate impacts. The project recognizes the cumulative contribution of CO2 emissions from various sources to climate change. There are likely to be net gains from specific project activities that could lead to carbon sequestration. The project shall comply with ESIA mitigation measures requiring tree plantation for affected trees.

Management of Hazardous Waste – The mitigation measures related to the treatment of hazardous waste include the use of off-site treatment methods and only delivering poles ready for fixing, proper disposal of any hazardous materials found on site, use of protective gear during work, appropriate disposal of construction materials and rubble in certified disposal sites, filling in and closing all latrines and septic systems. The mitigation measures for the use of heavy plant equipment, e.g., tippers for material delivery, include minimizing the use of heavy trucks, provision of drainage channels to guide surface liquid run-offs, use

of mulching to minimize soil erosion, establishing protocols for vehicle maintenance on site, and interdiction of dumping of any oil.

The use of lithium-ion batteries is generally safe and unlikely to fail once there are no defects and the batteries are not damaged. However, possible hazards associated with lithium battery damage include possible battery venting, explosion, and/or fire. Damage to lithium batteries can also occur immediately or over time from physical impact, exposure to certain temperatures, and/or improper charging. Lithium batteries also become a risk when they are disposed of after 20+ years of use, where they pose the risk of leaching heavy metals.

The Sierra Leone Electrification and Water Regulatory Commission developed in 2018 the mini-grid regulation for Sierra Leone. The Regulation provides instructions on the installation, operation, decommissioning, and disposal of lithium batteries, solar PV, inverters, chargers, conductors, transformers, and switch gears. Practice, however, still has many challenges. Cadmium Telluride (CdTe) Solar panels (life span 20+ years) and Li-ion batteries (life span 10+ years) being made of hazardous materials would require safe handling and storage until such time as recycling technologies or properly engineered landfills have been developed in Sierra Leone for their safe disposal.

The problem of low solar battery waste management capacity is not limited to Sierra Leone. The development of mini-grid solar systems in the country and in the sub-region is on the rise; coupled with the low capacity of waste management, both in terms of legal regulations and recycling of waste in Sierra Leone, there is a need to develop efficient laws and regulations, and also equip countries with up-to-standard facilities to manage the waste from panels and battery systems.

Consultation with the Renewable Energy Director on the status of battery and solar panel collection, transport, storage, and disposal in Sierra Leone indicates that discussions are on the way with the Sierra Leone Standards Bureau to conclude on developing standard guidelines on the quality of solar equipment and accessories to be imported into the country.

Annex vii details specific guidelines for waste and battery disposal. Collection, transportation, and disposal of hazardous waste materials shall be part of the EPC Contracts and the responsibility of the contractors.

Management of Potential Biodiversity Impacts - Due to the small size of mini-grids, this risk is not expected to be high. The use of anti-glare coating on the panel and installation of rotary equipment, or LED lights, are recommended to mitigate potential bird and bat mortality due to the reflection/perception of solar panels as water bodies (collisions).

6.2 Socio-economic Mitigation Measures

Socio-economic measures include education and awareness, hygiene and sanitation training, rules and regulations, institutional support (including skills training), and recruitment of qualified personnel, while socio-cultural measures could include allowing limited and

monitored access to restricted areas for cultural reasons where applicable. The mitigation measures for the public health issues: explore options to accommodate crew off-site and avoid camps, and in the absence of that, educate the crew about preserving vegetation, and provide decent temporary sanitation facilities like toilets. Use local and regional labor as much as possible and provide Mpox awareness training to the workers and the community, provide guidelines on local culture, behavior, and social life to the workers, and create walkways and plant grass where necessary. Below are three mitigation measures seeking to address key social impacts of the project.

Collecting Data on Gender and Energy Priorities **–** Gender analysis should be part of the environmental and social screening and assessment at the sub-project level. The analysis shall focus on identifying gender specific queries during the primary data collection process and available secondary data. The findings shall be used to distill gender priorities, benefits, and opportunities, and design sub-projects that shall benefit, particularly women and children, who often are underserved, to improve their quality of life. Access to reliable electricity extends the effective day through lighting, enabling children to study in the evening and other household members to be more efficient. Likewise, it has enhanced social inclusion by facilitating access to information and communication technologies like smartphones, TVs, and radios, which help individuals and communities feel more connected to society.

The following actions have been identified to track sex-disaggregated data related to the household and business connections:

a) *Application Form*: Application form for connecting to the grid and off-grid energy services should require applicants to identify whether they are a male or female-headed household or businesses/enterprises.

b) *Pre-Electrification*: Ensure that pre-feasibility studies for electrification conducted should gather and present information about the target population by the gender of the head of household and business.

c) *Post-Electrification*: Validate if the final profile of the connections made by the selected contractor reflects the gender of the household/business head prevalent in the community as recorded in the completed feasibility studies. The task will also involve collecting, monitoring, and reporting sex-disaggregated data regarding beneficiaries for the project indicators.

Stakeholder Engagement and Consultations – Weather mitigating physical impacts or socio-economic impacts, stakeholder engagement is key to mitigating adverse E&S impacts. Stakeholder consultations shall be carried out throughout all project cycles, including monitoring and evaluation to inform subproject designs and implementation.

Below is a table summarizing proposed mitigation measures, options, and guidelines**.** The mitigation measures are presented by project phase.

Table 10: Proposed Impact Mitigation Measures by Project Phase

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
Project Design and Planning Phase				
1.	Discrimination in labor recruitment and poor working conditions	Apply relevant labor laws Implement the LMP and its GM Apply the code of conduct Penalize violators in line with the code of conduct and the law	Developers	Throughout the project lifecycle
		Mobilize the Independent Verification Agency (IVA) to carry out regular supervision Organize public consultations with relevant stakeholders	PIU	Throughout the project lifecycle
	Exclusion of vulnerable individuals/ beneficiaries	Clear selection criteria Apply positive differential treatment of vulnerable groups such as persons with disabilities, youth, women, and marginalized beneficiaries in remote areas during recruitment and management of staff. Penalize those excluding others, in line with the code of conduct and the law.	PIU	Pre-construction stage
	Work site selection without adequate attention to E&S risks and impacts	Screen any proposed subproject in accordance with the Environmental and Social Management Framework (ESMF) prepared for the Project	PIU	Pre-site specific/precons truction stage (3 months)
	Preparatory Phase			
	Occupational health & safety	Workers/surveyors should wear appropriate PPE such as reflective jackets and safety boots. Use warning/caution signs to alert oncoming vehicles of the presence of workers.	Developers	Throughout the project lifecycle
2.	Unwillingness/ to adopt E&S measures and	Ensure adequate consultations at the local/traditional levels to confirm ownership and obtain from landowners. Ensure proper acquisition and documentation of land for the project.	PIU/ Developers	Throughout the project life cycle

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
	disputes over land	Put in place an effective grievance redress mechanism. Replace lost assets via compensating them at replacement cost Restoring livelihood		
Construction Phase				
3.	Loss of vegetation and impacts on flora and fauna	Limit vegetation clearance to the width of the trenches. Allow regrowth of vegetation in per-urban areas after construction works. Burning should not be used for vegetation clearance anywhere prior to trenching. Tree planting as a way of replacing the cleared vegetation/trees within the area.	Developers	Re-vegetation 2 months
4.	Impacts on soil and sediment transport	All concrete mixing will be undertaken on an impermeable plastic lining to prevent contamination of the surrounding areas.	Developers	(2 months)
5.	Generation and disposal of waste	The contractor should develop and implement a waste management plan during the construction phase. (See sample WMP included in the ESMP Annexes 3 and 6) Excavated soil should be reused for backfilling. Concrete debris should be collected and disposed of at an approved dumpsite. Scrap metals will be collected for recycling in blue colored waste receptacles for non-hazardous waste Hazardous waste shall be stored in a manner that prevents the commingling or contact between incompatible waste, and stored in properly labelled closed containers for evacuation by a third-party waste contractor Plastic waste such as used polythene bags and drinking water sachets should be temporarily collected in bins on site and disposed of at approved dumpsites Develop the legal regulations and facilities for the management of hazardous waste (used panels and batteries).	Developers	Throughout the project life cycle. 4 months at every cycle

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
6.	Occupational Health & Safety (OHS) issues	The contractor should adopt a health & safety policy, which should be implemented during the construction work. All active construction areas should be marked with high-visibility tapes to reduce the risk of accidents involving pedestrians and vehicles Prepare an emergency response plan for work. Dedicated experienced personnel should be to managing and overseeing the OHS aspects of the project. Training/induction should be provided for all workers. Proper supervision and monitoring should be ensured at site. Provide first aid kits on site and train supervisors on administering first aid. Appropriate PPE should be provided for workers and its use enforced.	Developers	Throughout the project life cycle
7.	Public safety and traffic issues due to labor influx, GBV/SEA due to labor influx	Sensitize the public, especially traders within the RoW, to the upcoming works prior to construction activities. Organize work into sections and complete each section before the next section to ensure trenches are covered within the shortest possible time. Cordon off all trenches and excavations with caution tapes and use warning signs at vantage points to indicate ongoing construction works. Prevent the entry of unauthorized persons to the construction site. Engage the staff of the Traffic Agency to direct traffic to reduce traffic congestion. Where necessary in extreme cases, provide alternative routes during road diversions with the assistance of the Sierra Leone Police Force or the Road Safety Corps. Organize awareness creation and sensitization for workers and the public on the prevention of Mpox and other sexually transmitted diseases. Engage experienced drivers and machine operators and provide training, especially for less experienced drivers/operators. Ensure that all COVID-19 precautionary measures are duly observed by both workers and the public accessing the facility.	Developers	Throughout project lifecycle

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
8.	Sanitation and hygiene	Provide bins for temporary collection of litter (including polythene bags, drinking water sachets, etc.) for disposal at approved dumpsites. Provide separate toilet facilities both for men and women for use by workers at every site. All toilets have water for washing hands.	Developers	
9.	Persons and properties affected by land acquisition or restrictions on land use	Engage affected persons prior to construction works to discuss and agree on affected property and reinstatement works. should be obtained before construction begins. All affected properties should be reinstated immediately prior to the construction works to their original or improved state, and in the process, obtain photographs of all affected and reinstated properties (before and after status) for evidence. In cases where affected crops are affected, appropriate compensation should be paid according to the current market vaue. In cases of Voluntary land Donations, compile a report of the process as well as associated records and documents be prepared for Mini grids prior to commencement of civil works	PIU, Developers	3 months
10.	Impacts from visual intrusion	Reinstate all trenched areas to their original or improved state. Proper housekeeping should be ensured at the construction sites. Non-reused waste should be collected and properly disposed of at an approved dumpsite.	Developers	5 months post-construction
11.	Dust and noise nuisance	Use dust abatement techniques such as wetting ground surfaces and untarred roads, covering soil delivery trucks, and limiting operations during windy periods. Ensure delivery trucks and other vehicles reduce speed on untarred roads to reduce air dust. Switched off vehicles/trucks' engines and earth-moving equipment when not in use. Install portable barriers to shield compactors, thereby reducing noise levels Use roadworthy vehicles and ensure regular maintenance of vehicles, equipment, and machinery to reduce noise.	Developers	2 months

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
		Keep work within working hours of the day.		
12.	Disruption of utility service	Liaise with utility service providers and telecommunication companies with service lines within the RoW to prevent the destruction of their lines.	Developers	3 weeks
13.	Fire risks	Educate workers and the public on the effects of fire and life safety training on the project. Prevent entry of unauthorized persons to construction sites, use caution tapes. Provide fire extinguishers at construction sites. Provide fire emergency contact numbers at construction sites. The contractor should prepare and implement a fire preparedness/emergency plan.	Developers	2 weeks
14.	Conflicts/public agitation	Continuously sensitize the public on the construction works and the availability of the GM throughout the construction period. Consult and seek the of affected persons before construction works. Reinstate any affected property immediately to its original or improved state. Provide alternative routes where necessary to ease the impact on road users. Engage the staff of the Road Safety Corps to direct traffic to avoid traffic congestion.	Developers	Term of the project
15.	Disruption of livelihoods	Consult affected persons on suitable times to carry out construction works, which should be factored into the scheduling of construction works. Sensitize affected traders on the schedule of construction works. Reinstate affected properties immediately after work completion at the section. who may have to temporarily move their wares and stores. And provide livelihood restoration for loss of income in accordance with the LRP Consider undertaking certain construction activities on weekends (Sundays) when commercial activities are less intense	PIU, Developers	5 months

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
16.	Chance finds/ cultural heritage and archaeological interest, as well as on sociocultural norms	Identify cultural heritage resources and existing ecologically sensitive areas and avoid them as much as practicable. Any antiquity found during the construction phase will be made known as required and it will be required the implementation of the Chance Finds Procedures. Where the observance of traditional and cultural norms about restricted noise-making during festivals will conflict with the timelines of the sub-projects, the PIU will engage the traditional authorities for exemptions if possible. ----	Developers	2 months
	Water Quality	The contractor should develop and apply measures for waste management to reduce risks to water bodies in the surrounding. Maintain Proper monitoring and supervision during construction activities.	Developers	# months
Operational Phase				
17.	Occupational health & safety	The operator should develop and implement an Environment, Health and Safety (EHS) Plan as a stand-alone document or part of the ESMP, both for construction and operation. The operator should adopt a health & safety policy, including an emergency response plan, which should be implemented. Health & safety induction should be carried out for all new employees, and periodic training should be conducted for all staff. Cordon off maintenance sites with caution tapes and use warning signs to alert the public of ongoing maintenance works. Proper supervision and monitoring should be ensured during maintenance activities. Provide first aid kits on-site and train supervisors on administering first aid. Provide health insurance for all staff. Appropriate PPE should be provided for workers and its use enforced.	Developers	Throughout the project life cycle
Decommissioning Phase				
18	Generation and disposal of waste	E-waste management plan is to be prepared that accounts for safe end-of-life disposal of equipment from solar installations		

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
		Waste segregation onsite, and non-reusable/recyclable wastes are disposed of through an accredited third-party waste contractor.		

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6.3 Challenges to the Mitigation Measures

E&S risks at the level of individual subprojects are limited in number and magnitude. However, the complexity of project design and capacity considerations contribute to the elevated E&S risk profile. The three project components have substantial differences in their design, technologies used, and scope. Components 1, that involves the development of solar mini grids and power systems, are comparatively riskier than Component 2, which involves SHS sales and installation.

The success of E&S risk management during project implementation will depend on the PIU's ability to adopt an approach that fully integrates it into EDSA's overall project management processes. Through this approach, EDSA is expected to be able to effectively manage risks associated with an emerging flow of hundreds of small mini-grids, as well as integrate relevant considerations into SHS companies' operations and effectively manage investors and contractors' E&S performance for university power systems. Key E&S challenges and approach to their mitigation are presented in Table 11.

Table 11 : Key E&S Challenges and Mitigation

S/N	Challenges	Approach to Mitigation
1	Decentralized project design with many small subprojects prepared by private sector implementing entities	Mini grid developers are expected to develop and maintain an effective ESIA for self-assessment, managing and monitoring risks and impacts of the construction and operation of the beneficiary solar off-grid companies. The preparation of an ESIA and ESMP requirements based on E&S risk rating of proposed sub-project activities, detailed and step-by-step E&S responsibilities for key players for each project component
2	Land acquisition, resettlement, livelihood restoration	Willing buyer and willing seller be applied (See Annex 15.10). The project will not fund the preparation and implementation of a resettlement framework (RF)/Resettlement Policy Framework or resettlement plans (RP)/Resettlement Action Plan (RAP)
3	Lack of awareness on E&S risks and impacts (communities, SHS customers, universities)	Sensitization and dialogue via various methods of citizen and stakeholder engagement. Preparation of the Stakeholder Engagement Plan and GM will assist in identifying, informing, educating, empowering, and collaborating with the various stakeholders. GM will help to get feedback from various stakeholders, such as public universities and teaching hospitals, and PAPs, before, during, and after implementation.
4	Lack of capacity among private sector implementing entities	Training for mini grid developers, SHS companies, and other responsible government agencies at all levels of Government.
5	Lack of recycling facilities	Development of a waste management plan during construction phases, construction waste, handling and disposal of hazardous chemicals and waste, and the disposal of end-of-life batteries containing hazardous materials during the operation phase (See Annex 15.6).

7 ESMF IMPLEMENTATION AND MONITORING PLAN

7.1 Objective of Monitoring

This section sets out requirements for monitoring the environmental and social impacts of the sub-project activities. Monitoring and evaluation are tools to ensure proper and timely implementation of environmental and social mitigation measures identified in the planning stage, based on the ESMF. The objective of monitoring is to:

- Ensure proper and timely implementation of environmental and social interventions proposed in this ESMF and other relevant documents to be prepared based upon the ESMF, such as the ESIA/ESMP.
- Alert project authorities by providing timely information about the success or otherwise of the environmental and social management process outlined in this ESMF in such a manner that appropriate decisions can be made to improve upon the process or avert any adverse impact.
- Make a final evaluation to determine whether the mitigation measures incorporated in the technical designs and the ESMP have been successful in such a way that the pre-project environmental and social condition has been restored, improved upon, or is worse than before, and to determine what further mitigation measures may be required.

Monitoring of environmental and social indicators will be mainstreamed into the overall monitoring and evaluation system for the project.

7.2 Types of Monitoring Required

7.2.1 Compliance Monitoring

The following activities should be conducted to ensure compliance with the ESCP and applied ESS and instruments, including the ESMF and subsequent ESIAs and ESMPs:

1. As part of the planning stage, ensure that relevant permits are obtained for specific subprojects.
2. Final designs should be completed and submitted to PIU
3. Confirm that all the design changes and design mitigation measures recommended by the ESIA/ESMP study have been incorporated into the final detailed design documents
4. During contract negotiations, confirm that the designs and working methods proposed by the contractors have taken into account the environmental and social considerations recommended in the ESIA/ESMPs
5. Following completion of the detailed designs, confirm that all mitigation measures recommended by the ESMF and confirmed by the ESIA study have been incorporated into the appropriate contract documents prior to signing.

6. During construction, confirm on a regular basis that all the agreed working conditions and procedures, regarding various environmental and social considerations, are followed satisfactorily.

7. During construction and upon completion of construction, ensure that all requirements regarding clean up and reinstatement have been satisfactorily met; and

8. During the operation of the project, ensure that all the mitigation measures recommended in the ESIA/ESMPs form part of the functions and mandate of the institution responsible for the management and operation of the project facilities.

7.2.2 Monitoring Environmental and Social Impacts

The actual environmental and social risks and impacts caused by project implementation should be closely monitored during the construction and operation of the project to examine the effectiveness of the mitigation measures. The goals of monitoring are to measure the success rate of the project, determine whether interventions have resulted in dealing with negative impacts, and whether further interventions are needed, or monitoring is to be extended in some areas.

Table 12: Monitoring and Evaluation Framework

S/N	PHASE	INSTITUTION RESPONSIBLE	PERFORMANCE AND INSTRUMENTS	PERIOD TO BE CONDUCTED
1	Preparation/ Pre-Construction Phase	Contractor	Screening checklist, ESMF, ESIA, etc.	5 months
2	Construction Phase	PIU	E&S report and activities	Monthly throughout the construction phase
3	Operation And Maintenance Phase	PIU, EPA-SL	ESMP and E&S reports	Monthly throughout the project life cycle
4	Decommissioning Phase	PIU, EPA-SL	Operational activities/E&S report	Monthly monitoring three months prior to decommissioning.

7.3 Environmental and Social Auditing

Environmental and social audits will be used as a management tool to enhance all the E&S management tools as captured in this ESMF. EDSA, through its PIU, shall commit to a systematic, documented, periodic, and objective evaluation. EDSA will facilitate periodic meetings with mini grid developers, SHS companies, contractors, and universities/communities with the aim of having a discussion surrounding good environmental and social practices and assessing compliance with Sierra Leone environmental laws and WB ESSs, which includes meeting regulatory requirements and applicable standards.

There will be a cycle of audits built into specific areas of the project, such as land acquisition or waste management. The frequency of audits will be risk-based and will vary with the stage of the project, and will depend on the results of previous audits. In addition, periodic auditing of the different plants and operations shall be carried out as per governing Sierra Leone regulations.

Further, audit results shall be used to improve the environmental and social screening procedures. Environmental and social auditing will be used towards the preparation of environmental and social screening, as well as in many circumstances in which the project activities carry a risk of harmful effects on the natural environment. All auditing strategies and programmes for the projects shall have reasons and justifications, which will be designed to establish the current status of the environment or to establish trends in environmental parameters where the projects shall be implemented. In all cases, the results of auditing will be reviewed, analyzed, and published by the PIU for the purpose of improving project implementation.

An independent consultant will be hired to evaluate the project implementation arrangements for PIU, in line with the ToR template (Annex 15.8). The audit shall be conducted by qualified staff, and the results shall be reported to EDSA to be addressed.

8 ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT PROCESS

The environmental and social risk management approach is tailored to its national scope and organizational structure. The core principle of the approach is to expand and strengthen E&S systems and the capacity of the private sector. This will be achieved through the adoption of formal and relevant ESIAs with appropriate E&S assessment and risk management for individual mini-grids in Component 1 and SHS installation in Component 2. The process begins with stakeholder consultations and engagement at the national level, including potential DRE companies, and capacity building for companies interested in providing renewable energy services. The PIU will lead that effort with the support of the RCU.

8.1 Eligibility and E&S Requirements

The eligibility requirements of the DRE companies will incorporate E&S criteria, some of which will be met prior to contract signature, and others will be prepared and implemented during contract execution, for instance, Operational Health and Safety Conditions and construction-specific ESMPs. The DRE companies will carry out environmental and social screenings as part of their prospecting activities. The screenings and subsequent ESIAs and EMPs will be subject to reviews and approval by the PIU before contract negotiations begin. The PIU is responsible for verifying that adequate stakeholder consultations were conducted, including the management of grievances, and that national laws and market-appraised and validated willing-buyer, willing-seller agreements have been signed if relevant.

It is a mandatory requirement to qualify for the minimum subsidy that mini-grid developers establish and maintain an internal Environmental and Social Management System (ESMS) appropriate to the nature of their business and commensurate with the level of its environmental and social risks and impacts. The ESMS will incorporate the following elements: (i) environmental and social policy; (ii) process for identification of risks and impacts; (iii) risk

management plans/ programs; (iv) organizational capacity and competency; (v) emergency preparedness and response; (vi) stakeholder engagement (including grievance mechanism); and (vii) monitoring and review.

The Regional Fund Manager (RFM) will ensure that the environmental and social requirements are met and incorporated, as relevant, in the draft agreement and will recommend that the PIU enter into the grant agreement with the company. Such an agreement will include an annex specifying the E&S requirements that the company or consortium must fulfill. Before any grant disbursement, the IVA will verify that all environmental and social eligibility conditions outlined in the grant agreement and the POM are satisfied. The PIU in Liberia will be responsible for regular supervision of activities at the national level. The IVA will also collect and monitor reports on the implementation of environmental and social risk management measures.

8.2 Competitive Tendering

The PIU/EDSA and/or the RCU shall play a leading role during this stage. Before the tendering process starts, the PIU/EDSA shall:

- Prepare the Lot Package, which contains all relevant information of each mini-grid community lot, including E&S information obtained during site surveys;
- Conduct a public advertising campaign for the Call for Expressions of Interest. The information made public during the campaigns should include: (i) E&S eligibility criteria as part of the overall criteria for developer selection, including a clean track record, such as no environmental fines in the past 3 years, etc.; and (2) site selection criteria, including ***E&S Exclusion Criteria for Mini Grid and Power Generation Sites*** that developers must apply; and
- Host bidders' workshop, which integrates E&S requirements.

8.3 Exclusion criteria for mini grid and power generation sites

The exclusion criteria for mini grid sites (component 1) and the interconnected mini grid sites will apply as follows:

1. Sites involving land acquisition or where willing-buyer, willing-seller agreements have not been reached
2. Sites located on land associated with illegal forced evictions of previous owners or occupants
3. Sites that do not comply with relevant environmental and social national or state regulations of Sierra Leone of the first phase of the Regional DARES
4. Sites located in nationally recognized protected areas and sensitive ecosystems (e.g., national parks, conservation areas, forests, wetlands)
5. Sites located in nationally and internationally recognized areas and sensitive ecosystems (e.g., national parks, conservation areas, forests, wetlands)
6. Sites located in critical natural habitats

7. Sites in flood-prone zones
8. Sites in locations and/or developed in a manner that involves significant adverse impacts on physical cultural property.

8.4 Construction and Operation

As part of preparation for mini-grid construction, the winning developer(s) will:

- Conduct E&S screening and classify sites into E&S risk category (I, II);
- Inform EDSA of outcomes of screening (consolidated report);
- In case any sites fall under the &S Exclusion Criteria for Mini Grid and Power Generation Sites, inform EDSA immediately upon this determination so that these sites can be removed from the lot;
- Prepare ESMP (for low/moderate risk) or ESIA and ESMP (for substantial), a willing buyer and willing seller agreement and/or Livelihood Restoration Plan, as applicable;
- Obtain any E&S permits required by law;
- Conduct stakeholder engagement and establish a grievance redress mechanism; and
- Submit relevant documents to EDSA (specifically, ESIAs and LRPs for category I) and keep documents for category II on file for verification by EDSA as part of oversight and monitoring.

For E&S risk categorization, substantial will be assigned to sites with higher E&S risks as compared to sites with low or moderate risks. The decision will be made by developers based on the outcomes of E&S screening done by them, verified and confirmed by the PIU/EDSA. Developers will classify sites as part of their environmental screening. Guidance on classification will be provided by the PIU/EDSA as part of the ESMF. The PIU/EDSA has the ultimate authority to decide whether a construction site should be categorized as low, moderate, or substantial. For example, sites requiring land acquisition could be rated as both low and moderate risk depending on the scope of the land acquisition. Substantial risk sites will require ESIAs and subsequent ESMPs, while sites with low and moderate risks will require ESMPs. In both cases, the developer will be required to conduct stakeholder consultations and engagement and establish a grievance redress mechanism. ESMPs will be kept by developers on file for verification by the PIU/EDSA and/or the IVA during sample checks/ audits. ESIAs shall be sent to EDSA for review and verification before construction can start, as those instruments present higher risks.

After the developer has submitted all required documents and EDSA has completed verification, the developer can start mini-grid construction. During mini-grid construction and throughout its operating life, the developer needs to:

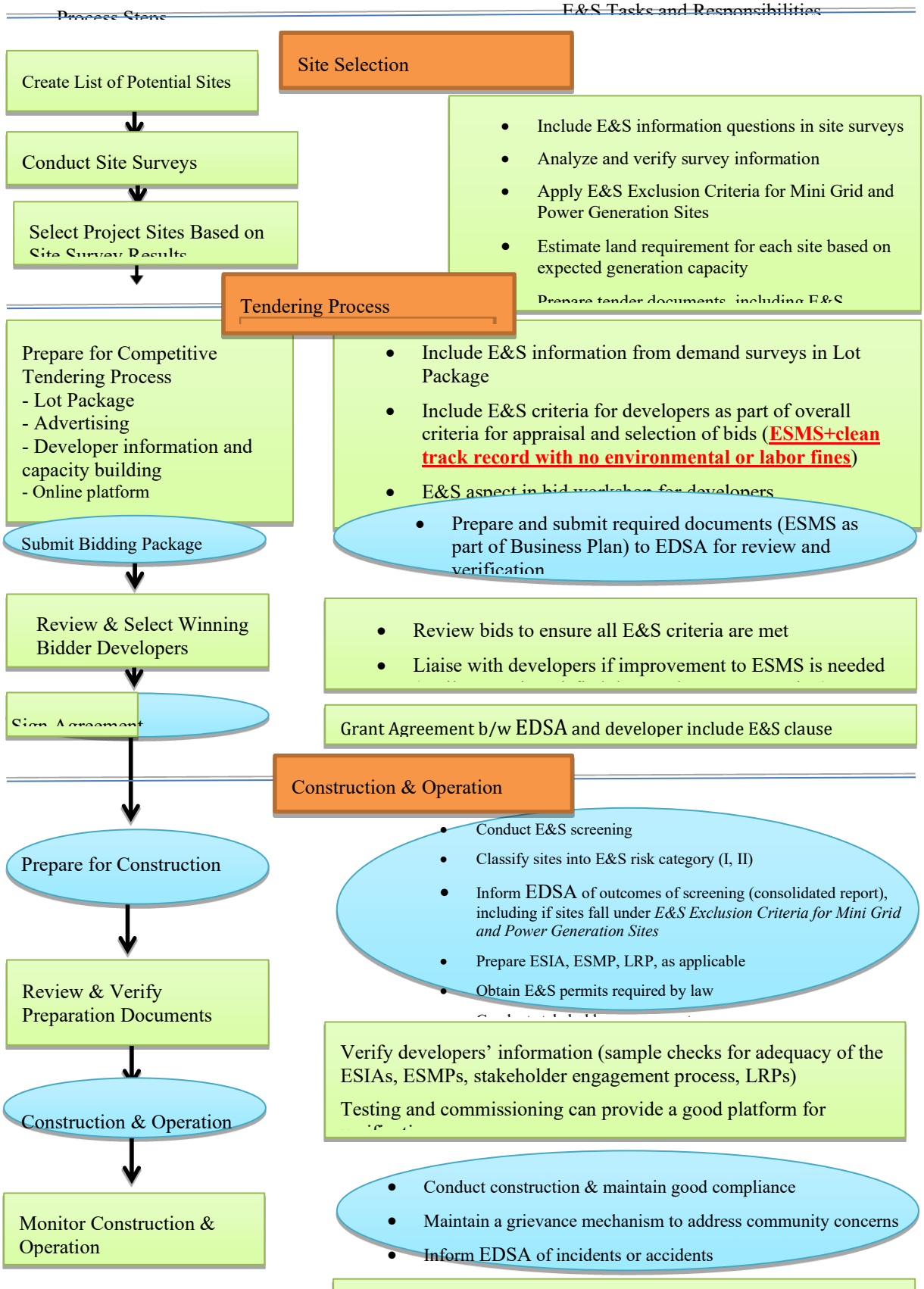
- Maintain compliance with E&S requirements;
- Maintain a grievance redress mechanism to address community concerns;
- Inform the PIU immediately of any incidents or accidents that can interfere with maintaining E&S compliance;

- Submit E&S reporting as part of regular progress reports to PIU, according to the template provided as part of the ESMS template in Annex 15.20.

Meanwhile, the PIU will:

- Monitor E&S performance through the project cycle on a sample basis; and
- Maintain an EDSA-level grievance redress mechanism to address any project-related feedback in a timely and meaningful manner.

Figure 3 : E&S Workflow for Minimum Subsidy Tender for Mini-grid Development (Green: EDSA; Blue: Mini-grid Developer)



Source NEP 2019

8.4.1 Performance-Based Grants

Under this subcomponent, mini grid developers submit a clean E&S track record as part of their application to be admitted into the program. Once accepted into the program, they screen and conduct E&S due diligence for one or more mini grids before submitting their proposals for funding, along with site-specific E&S documents. EDSA reviews and evaluates each proposal and approves, returns for adjustment, or rejects the proposal. For approved proposals, a Grant Agreement will be signed between EDSA and the mini-grid developer. The site-specific E&S documents must be verified by EDSA before construction can commence (using sampling as part of a risk-based approach). During construction and operation, the developer must maintain E&S compliance while EDSA continues to monitor its E&S performance.

In sum, the Performance-Based Grants program has 3 major stages: (1) Proposal–Acceptance into the Program; (2) Design Verification for Sites; and (3) Construction & Operation. Figure 5.1.1 shows the workflow of this component and the general E&S responsibilities of each key party. For further details, please refer to the Project Implementation Manual.

Stage 1: Proposal–Acceptance into the Program

At the beginning of the implementation period, EDSA will publish a program announcement, which will include: i) E&S eligibility criteria as part of the overall criteria for developer selection, including a clean track record, such as no environmental or labor violations or fines in the past 3 years; and ii) site selection criteria, including ***E&S Exclusion Criteria for Mini Grid and Power Generation Sites***.

Mini-grid developers who meet all of EDSA's eligibility criteria and thus qualify for entry into the performance-based grant program must prepare and submit an application package that includes the following:

- Documents establishing eligibility, including ESMS as part of a Business Plan for EDSA to review and verify (ESMS template is provided in Annex 15.20); and
- Proven clean track record on E& S compliance (no environmental or labor violations or fines in past 3 years).

EDSA would approve the developer for admission into the program after:

- Reviewing the proposal to ensure all E&S criteria are met; and
- Liaising with developers if improvements to ESMS are needed, until the developer has a robust system that EDSA is satisfied with.

Stage 2: Design Verification for Sites

Once the developer has been admitted into the program, the developer shall start preparing site-specific documents, including E&S documentation, as follows:

- Conduct E&S screening and classify sites into E&S risk category (I, II);
- Inform EDSA of outcomes of screening (consolidated report);

- In case any sites fall under the E&S Exclusion Criteria for Mini Grid and Power Generation Sites, inform EDSA immediately;
- Prepare ESIA and ESMP (for category I) or ESMP (for category II), as applicable; in case where ESIAs and/or ESMPs have been prepared by mini grid developers in advance of their application for performance-based grants, such instruments should be updated – if necessary - to ensure they meet World Bank safeguard policies pursuant to guidance provided in the ESMS template (Annex 15.20);
- Obtain any E&S permits required by law;
- Conduct stakeholder engagement and establish a grievance redress mechanism; and
- Submit relevant documents to EDSA (specifically, ESIAs category I) and keep documents for category II on file for verification by EDSA as part of oversight and monitoring.

EDSA will review and verify the site preparation documents through desk review of ESIA and ESMP, with sample site visits when feasible during design verification, with the aim of minimizing negative E&S impacts. In addition, EDSA will review all LRP and visit all sites where activities are expected to lead to land acquisition/ economic displacement.

Once EDSA is satisfied with the site-specific technical application, including E&S documents, it will sign a Grant Agreement with the developer, which shall include E&S clauses.

Stage 3: Construction and Operation

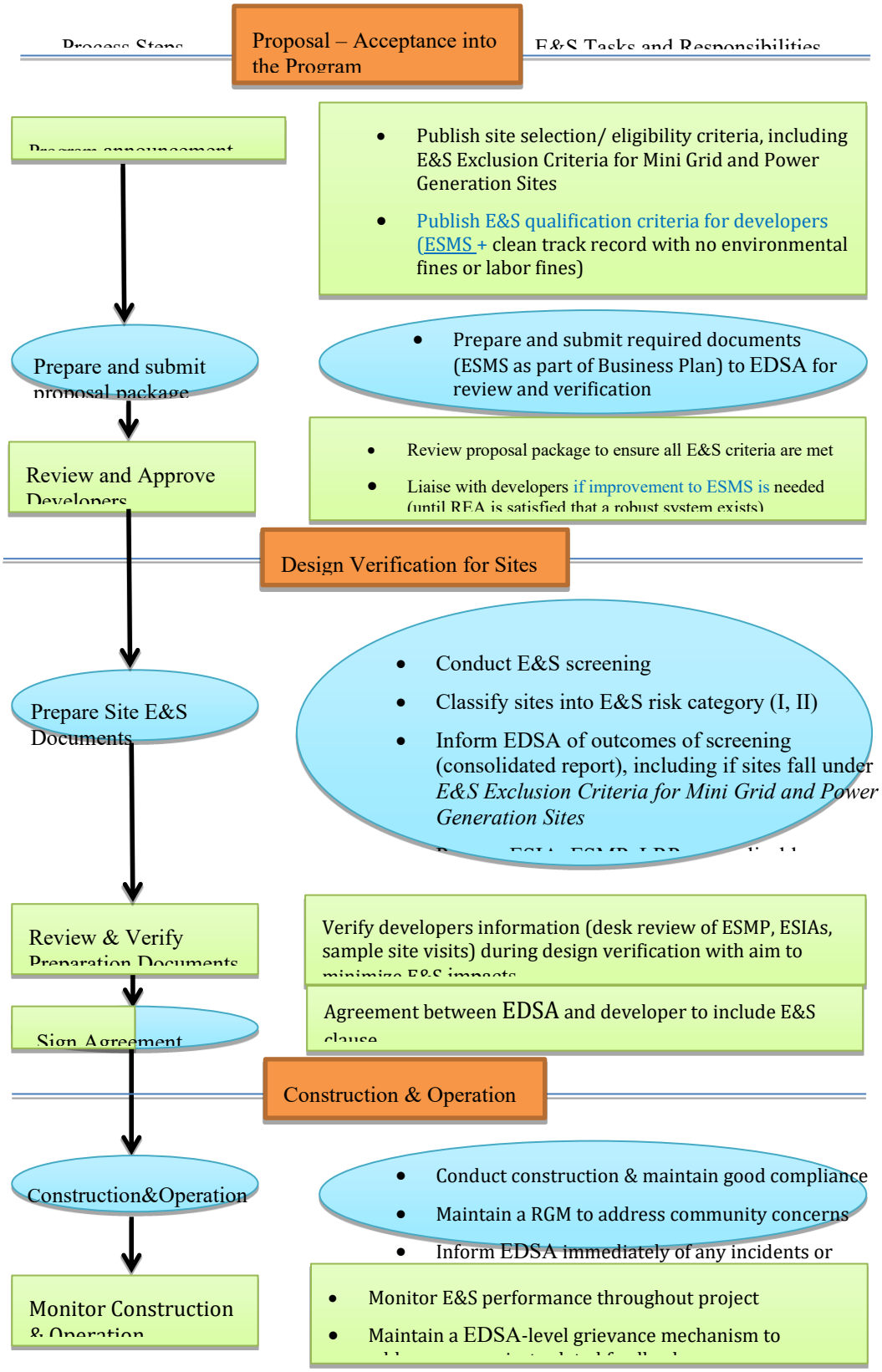
Once verification is completed, the developer can start mini-grid construction. During the construction and operation of the mini-grid, the developer needs to:

- Maintain compliance with E&S requirements;
- Maintain a grievance mechanism to address community concerns;
- Inform EDSA immediately of any incidents or accidents that can interfere with maintaining E&S compliance;
- Submit E&S reporting as part of regular progress reports to EDSA, according to the template provided as part of the ESMS template in Annex 15.20.

Meanwhile, the PIU will:

- Monitor E&S performance through project cycle; and
- Maintain a PIU-level grievance redress mechanism to address any project-related feedback in a timely and meaningful manner.

Figure 4: E&S Workflow for Performance-Based Grants for Mini-grid Development (Green: EDSA; Blue: Mini grid Developer)



8.5 E&S Management Process for Component 1:

8.5.1 Standalone Solar Systems for Homes, Enterprises, and Farms

The goal of this component is to help underserved Sierra Leone households and micro, small, and medium enterprises (MSMEs) access better energy services at a lower cost than their current service, via stand-alone solar home systems provided by the private sector. This component will support the deployment of stand-alone solar systems ranging in different sizes and levels of service. SHS standards are described in the SHS Operations Manual in detail.

Based on the qualification criteria established by EDSA, which include E&S requirements, SHS distributors will need to be qualified before they can apply for grants under this component. Once an SHS distributor becomes a qualified distributor, it can then submit a grant application, which, once approved, will cover a certain amount of SHS installation. Once the grant agreement has been signed, the distributor will start the installation and receive the grant based on the number of units of SHS installed, per the grant agreement. The distributor also needs to maintain good compliance and good customer service after installation. EDSA is responsible for verifying distributors' qualification, installation performance, overall compliance, and maintaining a GM for project-related feedback.

In sum, the process has three main stages: (1) Distributor Qualification Process; (2) SHS Installation Stage; and (3) Post Installation Stage. Figure 4shows the workflow of this component and the general E&S responsibilities of each key party.

Stage 1: Qualification Process

First, EDSA will establish and publish the qualification criteria for SHS distributors to apply to become "Qualified Distributor" under this project component. Specific E&S requirements are:

- Have a good E&S track record, meaning no E&S-related fines, violation record, litigation, or pending litigations in the past three years;
- Have an ESMS that meets EDSA's requirements and complies with ESS9 requirements – ESMS for this component is defined as several key policies and procedures prepared and implemented by an SHS company (see Annex 15.18 for guidance on the ESMS requirements for SHS developers);
- Have the institutional capacity to implement such ESMS; and
- Be willing to participate in E&S capacity building activities hosted by EDSA should EDSA deem necessary.

- Interested distributors can submit their completed Qualification Application Form and supply all required documentation for the application, including E&S documents, as part of the application. EDSA will review and verify the application before making the decision.
- Verify the adequacy of information submitted;
- Use questionnaire for lithium-ion battery management to assess practices of SHS companies (Annexes 15.6 and 15.7);
- Maintain EDSA-level GM to address project-related issues (this is a common requirement for all three components).
- After verification, EDSA and the SHS company would sign the Grant Agreement, which should include clear E&S requirements.
- SHS company's responsibility to maintain required policies in good standing; and
- SHS company will notify EDSA of any E&S issues that are affecting its compliance.

Stage 2: SHS Company Operations

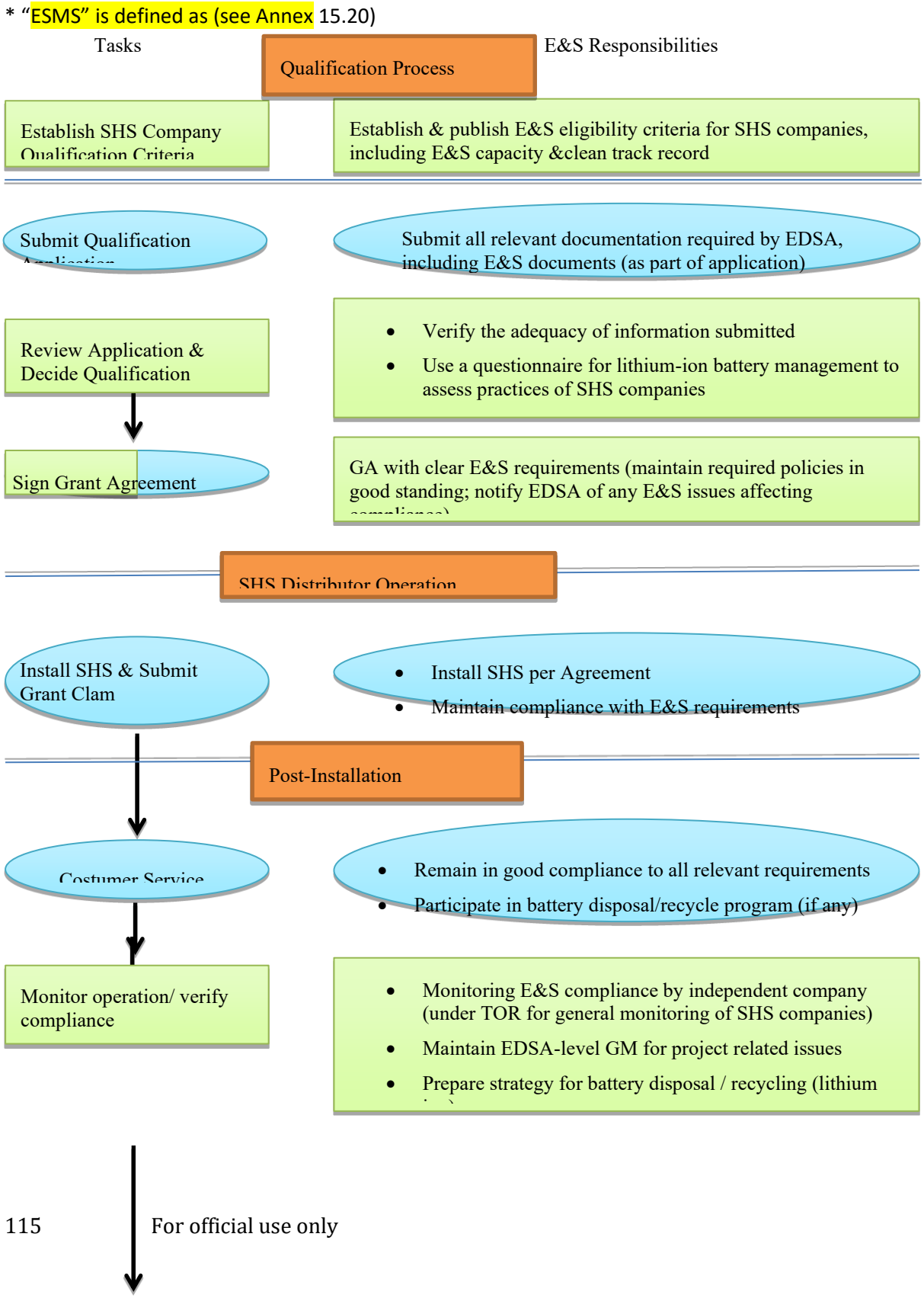
With the signed agreement, companies will start installing SHS per its terms and submit claims for grants, as long as its operation remains in good compliance with laws and all other E&S requirements. EDSA will pay for qualified claims and maintain a EDSA-level GM for any project-related issues.

Stage 3: Post-Installation

After the SHS has been installed and is in use, the SHS company is still responsible for maintaining good compliance with overall requirements, providing good customer service, and participating in the battery disposal/recycling program (as developed by EDSA).
EDSA's duty to monitor operation and verify compliance includes:

- Monitoring E&S compliance by an independent company (under TOR for general monitoring of SHS companies);
- Maintain EDSA-level GM for project-related issues; and
- Prepare a strategy for battery disposal/recycling (lithium-ion).

Figure 5 : E&S Workflow for Subcomponent 2: Standalone Solar Systems for Homes, Enterprises, and Farms (Green: EDSA; Blue: SHS Distributor)



9 INSTITUTIONAL ARRANGEMENTS AND FRAMEWORK

The key institutions with key responsibilities for environmental and social management of the DARES project are the Ministry of Energy (MOE) and ESDA/PIU, in collaboration with the Sierra Leone EGTC. The ESDA has Environmental and Social Safeguard specialists who have already worked on other World Bank-funded projects, as well as similar projects funded by other donors.

9.1 Roles and Responsibilities of Implementing Entities

The PIU will have the primary responsibility for monitoring and reporting on the environmental and social performance of project activities, in conformity with the environmental and social commitment plan of the project (ESCP). Other relevant government agencies, particularly the Sierra Leone Environmental Protection Agency (EPA-SL), will do their due diligence. The reporting requirements will be included in the project Operation Manual. The project investors and/or contractors will implement this ESMF, including its subsequent ESMP and other environmental and social instruments related to project operations, as specified in the ESCP and in the contracts of the contractors. The following describes the detailed roles and responsibilities of the key institutions involved in the implementation of the ESMF and the POM.

Table 13: Main Implementing Agency

Institutions	Roles
PIU	Will provide overall coordination of the Project and lead in the implementation of the different components (1-3) Overall responsibility for E&S due diligence and compliance monitoring. Will be responsible for the overall coordination of the project implementation and oversight. For the E&S risk management across project components, the PIU for the project will be responsible for: Overall oversight of the E&S risk assessment, management, and monitoring processes in line with this ESMF, for each component of the Project Implementing a reporting system from private sector entities to ESDA on the implementation of E&S requirements Engaging an independent E&S auditor to ensure that private sector entities are implementing E&S requirements set out in the ESMF consistently. Responsible for citizen engagement, maintaining adequate stakeholder engagement and grievance redress mechanisms, and ensuring that private sector entities maintain the same at their level. Will establish a communication line between the ESDA zonal offices and ensure project success in this aspect.

Institutions	Roles
	Will also facilitate liaise with Ministries, Departments, and Agencies (MDAS), Community-Based Organizations (CBOS), NGOS, and project-affected communities; Organizing and implementing capacity building programs for mini grid developers and other key stakeholders Defining, jointly with the respective states and local governments, the project priorities based on technical and policy development priorities; Resolving in consultation with the States/local governments, challenges requiring high-level intervention facing the project Engaging in preparing solutions for E&S strategic risks identified (battery recycling, land, and harmonization of standards); Monitoring the implementation of the project in consultation
EPA	Will provide environmental clearance as required by laws and regulations when the mini grid developer submits sufficient information and evidence of compliance
EPA	Will play the role of lead environmental regulator, overseeing compliance requirements, granting consent, and also monitoring or providing supervisory oversight for the PIU projects. Also, shall receive comments from stakeholders, public hearing of project proposals, and convening a technical decision-making panel, as well as provide approvals and clearances for ESIAs/EMPs and other E&S instruments.
Affected communities	Will participate in monitoring, subject to agreement with the mini grid developer and as outlined in the SEP
IVA	Hired by the PIU, the IVA will conduct an annual review of developers' E&S performance.
RCU	Consolidates GRM reports transmitted by national PIUS and ensures consistency of GRM performance between countries. RCU is at Regional level, collecting and coordinating what PIU are doing and guiding the national PIUs in each step during DARES preparation and implementation.
World Bank Group	Will lay out, through the ESCP benchmarks, all environmental and social safeguard issues concerned with the development and implementation of DARES.

Table 14: Roles and Responsibilities by Project Component

Component 1.1: Mini grid

Institutions	Roles
PIU/RCU	Plays an essential role in setting the overall E&S standards and ensuring the requirements are met throughout the process, including *E&S requirement setting* Set applicable E&S requirements and include them in the grand application process for mini grid developers. Such as the exclusion list and requirements for ESIA/ESMP, LRP, consultation, clean E&S track records, etc. Require mini grid developers to prepare ESMPs. A sample mini-grid developer ESMP is available in Annex 15.20, and capacity building will be provided to help developers design and implement a suitable ESMP. Integrate E&S requirements in legal agreements with mini-grid developments. 2. E&S due diligence: PIU will conduct sample site visits for low and moderate-risk mini-grids to validate that the risk categorization and risk management design/implementation are sufficient. 3. E&S monitoring: PIU will conduct monitoring activities during mini grid construction and operation, such as sampling, risk-based checks, and site visits. 4. E&S reporting: PIU will: Review E&S reports submitted by the developers and conduct follow-ups based on desk-top reviews and site visits. Maintain records of developer screening, ESIAs, ESMPs, and/ or LRPs, and other relevant documents 5. E&S auditing: PIU will hire an independent E&S auditor
EPA	Will provide environmental clearance as required by laws and regulations when the mini grid developer submits sufficient information and evidence of compliance
Mini grid Developers	E&S requirement setting: mini grid developers will incorporate application E&S requirements in their institutional ESMS, which include national and regional laws/policies and any requirement set by the PIU/ESDA and other investors (if any). E&S screening: Conduct the actual E&S screening based on all relevant requirements, employing or hiring qualified E&S specialists, and provide sufficient resources for such activities. Determine key E&S risk and impacts of individual mini grids and assign E&S category (I or II), corresponding to high, medium/low risk. Submit a list of category I sites to ESDA before beginning construction. E&S due diligence: mini grid developers will prepare and integrate into project design that: (1) for Category I projects, ESIA or LRP as needed; (2) for

Institutions	Roles
	Category II projects, ESMP; and (3) for all projects: The Stakeholder Engagement Plan (SEP) and Grievance Mechanism. E&S monitoring: mini grid developers will conduct self-monitoring activities in line with their ESMS and maintain all monitoring records properly. E&S reporting: Prepare E&S reports to the PIU/ESDA based on PIU/ESDA reporting requirements; Report any incident or accidents within several days of occurrence, including any E&S fines, litigation, or other administrative/legal issues. E&S audit: Mini grid developers will provide all relevant reports and documents to the independent E&S auditors in a timely manner upon request.
EPA	Same function above
Affected Communities	Will participate in monitoring, based on the arrangement agreed with the mini grid developer and outlined in the SEP
Component 1.2: SHS	
PIU/RCU	Sets the E&S standards and ensures the requirements are met throughout the process. Its responsibilities include. 1. SHS company grant application stage Prepare elements required for an ESMS in line with ESDA's requirements. Submit a statement of the current practice of battery disposal/recycling. SHS company operations stage Remain in good compliance with all relevant requirements. Participate in battery disposal/recycling program (if any). 3. Monitoring stage: Conduct self-monitoring to ensure compliance. Provide relevant documents to ESDA in a timely manner when requested.
Component 2: Urban access/ Rooftop	
PIU	Same as 1.1 and 1.2
Interconnected Developers	Same as 1.1
EPA	Same as above

Table 15: Overview of Relevant Institutions

Institution	Role
Ministry of Finance	The Ministry of Finance will function in the capacity of the Republic of Sierra Leone (the borrower)
Ministry of Justice	The Ministry of Justice shall sign on behalf of the government as the borrower.
Ministry of Environment	The Ministry of Environment is mandated by the Republic of Sierra Leone to ensure environmental protection and natural resources conservation for sustainable development in the country. They promote cooperation in environmental science and conservation technology with similar bodies in other countries and with international bodies connected with the protection of the environment and the conservation of natural resources. The Ministry also cooperates with other Ministries, Local Government, statutory bodies, and research agencies on matters and facilities relating to the protection of the environment and the conservation of natural resources. The EPA will ensure that all project/sub-project ESIAs meet international "best practices," and the PIU will regulate and enforce the implementation of all EMPs developed for the project.
The ESDA	This is the designated agency to handle all policy issues pertaining to rural electrification. It will be the primary representative in the execution of the project.

9.1.1 Community Level Institutions

This includes direct and other concerned stakeholders/groups in the counties. They will be continuously consulted prior to any project activities in the community and throughout project implementation. This may have complaints/views that need to be resolved in the choosing and execution of the various sub-projects.

9.1.2 Civil Society Organizations

Non-governmental organizations (NGOs), unions, and charities present in the counties at various levels can be direct and/or other concerned stakeholders. They can serve as an interface and can speak for the people. They will be continuously consulted as part of the project preparation and

implementation before any project activities in the community where they work or have ties, historical, social, or technical.

10 STAKEHOLDER ENGAGEMENT AND GRIEVANCE MECHANISM

Early and continuous stakeholder engagement is very important because it will allow the communities and the potentially Project Affected Person(s) to contribute input and feedback information, aimed at strengthening the development project and avoiding negative impacts, or mitigating them where they cannot be avoided. It also reduces the possibilities of conflicts between the project and adjacent communities. Therefore, effective and close consultation with them is a prerequisite for the successful running and execution of the DARES.

As such, there is a need to utilize social development approaches (such as inclusive and continuous stakeholder participation in project implementation) as key accelerators to achieving results. The social sustainability program will support, but also test what citizens can do to keep the government's investments through the project operating properly and yielding benefits to the citizenry as intended.

Stakeholder and citizen engagement will be built by:

- Setting up effective grievance redress and beneficiary feedback mechanisms;
- Ensuring an intensive program of engagement with project stakeholders;
- Deploying effective strategic communications and public education;
- Deepening the consultation process, which began during project preparation; and
- Monitoring social impact through annual stakeholder surveys.

The PIU will engage with stakeholders, including communities, groups, or individuals affected by the project, and with other interested parties, through information disclosure, consultation, and informed participation in a manner proportionate to the risk to and impacts on affected communities. Stakeholders' engagement shall take place at the inception of the planning stages, for example, when the potential mini grid project sites are being investigated, and as soon as the universities are identified.

10.1 Stakeholder Consultation and Engagement

Stakeholder consultations and engagement are sequenced in a three-stage process designed to progressively expand participation consistent with the evolution of project activities from design to implementation. Public stakeholder consultation and engagement will expand and deepen as project activities become spatially and socially more specific. This sequencing ensures that stakeholders are engaged at the point where decisions remain influenceable, and that

consultation intensity increases as geographic footprints and potential impacts become clearer, consistent with the principles of meaningful consultation, inclusiveness, proportionality, and iterative feedback loops under ESS10.

Phase 1 Strategic, Regulatory, and Market Consultations – Technical meetings between the World Bank and institutional and market stakeholders, including relevant ministries, regulators, implementing entities, environmental authorities, and private sector actors, to address upstream technical, regulatory readiness, implementation arrangements, operational, legal, and regulatory issues critical to the feasibility and scalability.

Phase 2: Regional, District Civil Society Stakeholder Consultations and Engagement. Public consultations to foster social cohesion and project appropriation at the regional and district levels through the engagement of national, regional, and district stakeholders, private stakeholders, and civil society, to deliberate on the proposed project operational approach, design, sites, institutional arrangements, economic conditionalities, dividends, and potential adverse environmental and social impacts.

Phase 3: Local Government, Community, and Citizens Consultations and Engagement. Public consultations between national, regional, district, private, and civil society stakeholders to foster social cohesion and project appropriation at the local government, community (including community leaders, vulnerable groups), and citizens' level, to deliberate on the proposed project operational approach, design, sites, institutional arrangements, economic conditionalities, dividends, benefits, and potential adverse environmental and social impacts. The three phases of consultations will be carried out throughout project implementation, and in line with the requirements of the Stakeholder Engagement Plan.

Three Bank-led technical meetings with selected institutional stakeholders and private stakeholders took place during project preparation. The meetings focused on strategic, regulatory, and market aspects of the project. Additional consultations will be carried out continuously throughout the project implementation in line with the three-phase approach, consistent with the Stakeholder Engagement Plan (SEP). 1) Three meetings held. 2) All meetings were virtual. 3) Number of participants varied between 5 - 7. 4) The meetings were organized by the World Bank Team. 5) Two institutional stakeholders met. 6) Gender breakdown, unknown. Key issues discussed included: i) Regulatory gaps; ii) Private sector mobilization; iii) MIGA Guaranties; iv) Ownership of mini-grids; v) Licensing requirements; vi) NEP validation time; vii) Electricity Act 2025; viii) Parliament’s request to review license templates; ix) SHS regime; x) Licensing thresholds.

Public consultations and stakeholder engagement shall be carried out prior to the project's effectiveness date and maintained throughout the implementation of the project. The stakeholder engagement and public consultation entail the process of informing the institutions/communities on: (a) the need to carry out the sub-projects in their environment, (b) the scope, and (c) the need for the institution/community to own and safeguard the project as beneficiaries and stakeholders. Such engagement is important because it will give the institutions/communities and the

potentially project-affected persons the opportunity to contribute input and feedback information, aimed at strengthening the development process and avoiding negative impacts or mitigating them where they cannot be avoided. Effective and close consultation with them is a prerequisite for the successful running and execution of the project. Public participation and consultation will take place through meetings, radio programs, requests for written proposals/comments, filling in questionnaires, explanations of the project to the locals, and making public documents available at the national and local levels.

At the local level, suitable locations will include the Village squares, church halls, and residences of traditional or recognized leaders. These measures would take into account the low literacy levels prevalent in these rural communities by allowing enough time for responses and feedback. Notwithstanding, the best guarantors for public interest are traditional authorities, such as the chiefs and other religious leaders who are responsible members of their local communities and can inadvertently be part of the potentially displaced (economically or physically) individuals/households, either in part or in whole.

The objectives of stakeholder engagement are:

- Are these projects going to provide any benefits for the local people?
- Whether local people get better access to electricity?
- Whether solar panels have any impact on the health of the people and the crops growing in the area?
- What will the rate for land be payable to the landowners?
- What will be the fate of agricultural laborers who do not own land and are dependent on landowners for labor work on agricultural land owned by big farmers?
- How would the developer/constructor ensure that the noise/dust/labor camps setup during the construction phase of the project does not impact the local village community?
- Will the construction activity have any adverse impacts on our existing surface water resources?

10.1.1 Special Requirements for Subprojects with Potential Resettlement

The Project grievance mechanism (GM) incorporated in the SEP shall allow the general public in the project area, affected communities or individuals, and PAPs to file complaints regarding land acquisition issues and to receive responses promptly. The system will also record and consolidate complaints and their follow-up. When a developer/contractor conducts construction on a site that might require land acquisition, the issue shall be addressed through a willing buyer and a willing seller arrangement, land lease, or land donation. DARES Sierra Leone will not fund projects that require the preparation of RP/RAP.

Stakeholder Engagement for Mini Grid Construction

1. As part of the minimum subsidy tender process, early stakeholder engagement for this component will be conducted at the site investigation stage by Sierra Leone. Sierra Leone shall take into account the comments from such consultation in deciding whether a potential mini-grid construction site should be selected for the lots. Subsequently, mini grid developers will continue to conduct stakeholder engagement as part of their ESMS.

2. The stakeholder engagement as part of the performance-based grants process will be conducted by the mini grid developer as part of their ESMS. Stakeholder engagement would start before they submit their proposals. A summary of findings, a detailed description of the process, and an engagement log should be included in the Proposal Package. Stakeholder engagement should continue throughout subproject construction and operation. If EDSA deems the initial stakeholder engagement is not sufficient, it can ask the developer to conduct further consultation before the construction or any preparation work begins.

10.2 Grievance Mechanism (GM)

Through the SEP, the project will set up a GM for people to report concerns or complaints if they feel unfairly treated or are affected by any of the subprojects. A separate GBV GM shall also be established to address issues relating to GBV/SEA/SH and any victims. The GM system will record and consolidate complaints and their follow-up.

While the GBV GM is designed to exclusively and confidentially handle matters of GBV/SEA/SH nature, the project GM system will be designed to handle complaints perceived to be generated by the subproject or its personnel. It may also include disagreements about compensation and other related matters. The mechanism will, amongst other things:

- provide information about project implementation;
- provide a forum for resolving grievances and disputes at the lowest level;
- resolve disputes relatively quickly before they escalate to an unmanageable level;
- facilitate effective communication between the project and affected persons;
- win the trust and confidence of project beneficiaries and stakeholders and create productive relationships between the parties.

The GM should review any existing resolution systems (government/traditional) that are operative in the area and propose ways that the GM may fit within these systems. Ideally, the subproject GM should have second and third levels of appeal (including the court system, if appropriate, for

legitimate claims that cannot be resolved at lower levels). The functioning of the GM system, how to register complaints (written, by phone, or in person), where to go, and hours of service, all should be clearly explained in the local language during initial public consultations on the subproject. Local language brochures should be provided, reiterating the functioning of the GM.

The PIU is responsible for setting up and maintaining the GM that allows the general public and affected communities or individuals to file complaints and to receive responses in a timely manner. The system will also record and consolidate complaints and their follow-up. This system will be designed for handling complaints perceived to be generated by the project or its personnel. It may also include disagreements about compensation and other related matters.

The GM will be communicated to all stakeholders in the course of EDSA's stakeholder engagement activities and will remain available throughout the project cycle. It is expected to address concerns promptly and effectively, in a transparent manner that is culturally appropriate and readily accessible to all project-affected parties, at no cost and without retribution. It will also allow for anonymous complaints to be raised and addressed.

The PIU will assign a specific staff member to ensure that it is functioning properly. The consultants should review any existing GM systems (government/traditional) that are operative in the area and propose ways that the GM may fit within these systems. Ideally, the GM should have second and third levels of appeal (including the court system, if appropriate, for legitimate claims that cannot be resolved at lower levels). The functioning of the GM system, how to register complaints (written, by phone, or in person), where to go, and hours of service, all should be clearly explained in the local language during initial public consultations on the project. For the purpose of a clear procedure table below presents a typical grievance redress process and modality.

The Grievance Management Process, as shown in Table 16, will include;

- Different ways in which users can submit their grievances, which may include submission in person, by phone, text message, mail, email, or via a website;
- A lot where grievances are registered in writing and maintained as a database;
- Publicly advertised procedures, setting out the length of time users can expect to wait for acknowledgement, response, and resolution of their grievances;
- Transparency about the grievance procedure, governing structure, and decision makers; and
- An appeals process (including the national judiciary) to which unsatisfied grievances may be referred when resolution of the grievance has not been achieved.

Table 16 : Grievance Management Process

Step	Description	Timeframe	Responsibility
Step 1: Uptake	Grievance received through Community Liaison Officers (CLOs), hotline, SMS/WhatsApp, email, website, letter, or grievance box	Day 0	CLOs and PIU
Step 2: Registration and Acknowledgment	PIU logs the case into the GM Information System (GMIS), assigns a tracking number, and acknowledges receipt to the complainant	Within 2 working days	PIU GM Focal Point
Step 3: Screening and Categorization	Complaint classified by type (service, land, labor, environment) and urgency	Within 2 working days	PIU GM Focal Point
Step 4: Referral	PIU assigns the complaint to the responsible entity for resolution (DRE Company, Fund Manager, Fiduciary Agent, Contractor, Local Authority)	Immediately after screening	PIU GM Focal Point
Step 5: Investigation and Resolution	The entity responsible investigates and proposes a resolution based on agreed standards and procedures	10 to 15 working days	GRC
Step 6: Verification of Resolution	PIU contacts the complainant to confirm satisfaction before closing the case. If unresolved, escalation applies	Within 5 working days	PIU GM Focal Point and GRC
Step 7: Closure or Escalation	Case closed if resolved; otherwise, escalated to PIU Management, RCU, or World Bank GRS	As needed	PIU / RCU / WB GRS
Step 8: Independent Verification	IVA conducts random verification and field validation to ensure fairness	Periodically	Independent Verification Agent

If complainants are not satisfied with the grievance process, even after arbitration, the affected persons will still have the right to present their complaint through the court system. Complaints related to GBV and Anti-Money Laundering / Countering the Financing of Terrorism will be managed separately, following respective procedures as set out in the GM.

10.2.1 The DARES-PIU Grievance Redress Committee

The Grievance Redress Committees, GRC, will be mandated to deal with all types of grievances arising at the community level due to DARES and its subprojects except GBV/SEA/SH matters. As earlier indicated, a separate GBV GRC shall be established to address any grievances relating to

any GBV/SEA/SH in accordance with the provisions of this ESMF under Section 9.5. The project GRC members will comprise qualified, experienced, and competent personnel who will be able to interact and gain the trust of the Affected Persons (APs) in their communities. The GRC should consist of both male and female representatives. They should be able to accept complaints, provide relevant information on the process, discuss the complainants' situations with APs, and explore possible approaches for resolution. The project Grievance Redress Committee will include the following members;

1. PIU Environmental Safeguards Specialist, Social Development Specialist, and GBV specialist.
2. PIU Communication Specialist
3. PIU M&E Specialist
4. Energy Gender Specialist (if available), supported by a nominee each from:
5. Office of the Head, PIU
6. PIU Procurement Unit
7. Project Engineers
8. Office of the EDSA Director of Promotions

The project Committee will be responsible for the following:

- Communicating with the Affected persons (AP's) and evaluating if they are entitled to recompense.
- Publicizing within the Communities, the list of affected persons, and the functioning of the established grievance redressal procedure;
- Recommending to the Social Officer of the PIU solutions to such grievances from affected persons;
- Communicating the decisions to the AP's;
- to acknowledge appeals from persons, households, or groups who rightfully will not be affected by the project or its sub-projects, but claim to be,
- Recommending to the PIU whether such persons should be recognized as AP's, and
- Communicating back the decisions to the Claimants.

This committee shall be the apex authority of the DARES GM, which will make recommendations for action to the Head of Project Management Unit in the case of issues of extreme importance, or

make referral to the Citizens' Rights/Mediation Centre in the Ministry of Justice of an applicable state in the case of grievances that are either unresolvable at the committee level or found to be extraneous to the execution of the project.

10.3 Gender Based Violence (GBV) and Sexual Exploitation, Abuse and Harassment (SEAH)

All complaints related to GBV shall be treated in a private and confidential manner, limiting information to what the survivor or complainant is freely willing to provide. A separate register shall be opened for this category of cases and shall ONLY be accessed by the community-based GRC secretary, the GM coordinator at the PIU (and any female GRC member empowered to handle GBV cases where the Chairman and Secretary are all male). The complainant (if a survivor) shall be attended to with empathy, assurance of safety, and confidentiality. In the event that the complainant is not willing to divulge any information, the GM officer should respect this view, and the complainant should be referred to the appropriate nearest medical centre, approved with available GBV service provider or police, depending on the complainant's choice. Such a complaint should be reported to the World Bank Task Team as well by the PIU GRC.

Other considerations for the handling of GBV/SEA grievances include:
No GBV data on anyone who may be a survivor should be collected without making referral services available to support them. All GBV complaints should be referred to the right service provider and other relevant institutions. Information to be requested should be limited to: The nature of the complaint (what the complainant says in her/his own words without direct questioning), if, to the best of their knowledge, the perpetrator was associated with the project.

Upon receiving a complaint, the assigned representative must complete a complaint intake form, ensuring that the survivor provides written consent before proceeding. If the survivor has not yet been connected to support services, the intake officer must confirm their preferences and facilitate referrals to local medical, psychosocial, or legal assistance, either in person or remotely, as required. GM operators must protect confidentiality, document only essential details: the survivor's exact account, age, and any potential connection between the perpetrator and project activities and refer the matter promptly to the appropriate GBV committee/group. Survivors will be provided with clear, accessible information about the process, timelines, and available support, and retain full autonomy over participation and data sharing. The survivor's autonomy must be respected at all stages. This approach prioritizes the safety, dignity, and access to essential support for survivors while maintaining rigorous accountability measures. Any information collected about a survivor or the alleged perpetrator should be stored separately from other grievance documentation, in a secure, lockable space, with strictly limited access.

To ensure proper handling of cases at the community level, Community Liaison Officers and other corresponding GM reporting points must receive training on:

- Active listening techniques to engage survivors with sensitivity,
- Secure referral procedures for SEA/SH incidents, and
- Confidential storage of intake documentation.

Complaints will be filed with written survivors' consent, and immediate referrals to support services will be made where necessary. The GM focal point will verify service provision, classify the case, notify project Social and GBV specialist **within 24 hours,** and strictly limit information sharing to protect identities. **SEA/SH cases must be reported to World Bank immediately when it becomes known to the project**.

The GM focal point at the PIU must provide a formal acknowledgement of the SEAH grievance within three (3) days of filing, depending on the initial complaint delivery method. If the complaint was received via a SEA/SH/ GBV service provider, all communication with the survivor may be managed through the provider.

The PIU Social and GBV Specialist (trained in survivor-centered approaches) will investigate within 10 days to examine the facts of each case and assess incidents to:

- establish any project linkage and
- recommend proportionate disciplinary actions to the accused's employer.

Final disciplinary decisions remain with employers, while legal determinations fall to judicial authorities. This process ensures accountability while respecting institutional boundaries and due process.

The Social and Gender-based Violence Specialist at the PIU will act to facilitate the survivor's access to this forum, and make appropriate referrals to GBV service providers, where needed.

Ongoing monitoring will ensure confidentiality, informed consent, and proper service referrals. Survivors will be informed of outcomes within fourteen (14) days and can appeal decisions through an established committee within the PIU responsible for ascertaining the facts of the case. All data gathering will prioritize respondent safety, confidentiality, and informed consent, with special safeguards for children and vulnerable groups and rigorous standards for team training and support.

The following guidelines will be followed in engaging stakeholders and affected parties on SEA/SH:

- Information gathering and documentation must be done in a manner that presents the least risk to respondents, is methodologically sound, and builds on current experience and good practice.

- In maintaining records, all details will be kept unidentifiable in individual cases, and the confidentiality and safety of GBV survivors will be protected above all. This means restricting access to case date and incidents' report in the data management system.

- The safety and security of all those involved in information gathering about SEA/SH cases of paramount concern and should be continuously monitored. The confidentiality of individuals who provide information about SEA/SH cases mut be always protected.

- Anyone providing information about SGBV must give informed consent before participating in the data gathering activity.

- All members of the data collection team must be carefully selected and receive relevant and sufficient specialized training and ongoing support.

- Additional safeguards must be put into place for children under 18 years, that are to be the subject of any direct incident information gathering, including mandatory presence of a trained professional adept at communicating with children safely and ethically.

Key provisions of SEA/SH within project GM will include the following:

- Confidential reporting channels are available directly to the PIU SEA/SH Focal Point or partner GBV service provider.
- No personal data is recorded in the GMIS; only non-identifiable case codes are used.
- Consent of the survivor is required before any action is taken.
- No retaliation is tolerated; protection measures are activated immediately.
- Referral pathways include medical, psychosocial, legal, and security assistance.

DRE companies and contractors must sign and comply with the project's SEA/SH Code of Conduct.

11 CAPACITY BUILDING

ESDA, together with the RCU, is committed to providing resources essential to the implementation of the ESMF. Resources include human resources and specialized skills, organizational infrastructure, technology, and financial resources. ESDA will establish and maintain documentation as necessary to demonstrate conformity to its requirements of its ESMF and the results achieved, with a sound procedure to identify, store, protect, retrieve, retain, and dispose of such documentation. The ESMF documentation shall include:

- documents, including records, required by national or international laws;
- document, including records, determined by the organization to be necessary to ensure the effective planning, operation, and control of processes related to its significant E&S aspects.

Consistent with its commitment to compliance, ESDA shall establish, implement, and maintain a procedure(s) for periodically evaluating compliance with applicable E&S requirements. EDSA shall keep records of the results of the periodic evaluations.

ESDA management shall review the ESMF at planned intervals to ensure its continuing suitability, adequacy, and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the environmental management system, including the environmental policy, environmental objectives, and targets. Records of the management reviews shall be retained.

For effective implementation of the ESMF, there will be a need for technical E&S capacity in the human resource base of ESDA as the implementing institution, as well as key private sector entities responsible for the implementation of activities under project components. An appropriate understanding of the mechanisms for implementing the ESMF will need to be provided to the various stakeholders implementing ESDA projects. It will also be important to ensure that ESDA has sufficient capacity and systems for effective oversight of the fairly complex processes for E&S risk management with multiple parties involved. Table 19 summarizes the potential challenges faced by components 1, 2, and 3, and capacity building can help address them effectively.

Table 17: Off-grid components 1&2 challenges and mitigation measures

Challenges	Mitigation
1. Lack of awareness	Promotional program Training programs
2. Lack of access to financing	Select and strengthen the capacity of participating credit institutions. Capitalize a credit line. On-lend to: solar home system companies for working capital, mini grids for investment, or MFIs for on-lending to SHS customers
3. Untested business models	Public-private partnership enterprise model with the ultimate goal of commercialization The presence of multiple program partners ensures healthy competition. Phased reduction of grants Training for program partners in enterprise and financial management
4. Lack of institutional capacity	Institutional development grant Long-term concessionary credit Staff training program
5. High cost of quality SHS equipment and mini grids	Capital buy-down grant. Concessionary credit facility Consumer in-kind or cash equity Increased volume of business
6. Lack of quality assurance	Technical Standards Design assistance services Quality control by the Program Manager Training to Participant Organizations in good practices in design, installation, and service
Lack of recycling facilities and regulations on handling hazardous waste	Work on building the facilities to manage waste and upgrading the national regulations reflecting international standards

In general, to enhance the respective roles and collaboration of the relevant stakeholders, the following broad areas (not limited to) for capacity building have been identified as deserving of attention for effective implementation of the ESMF:

- E&S management planning and monitoring systems, impact assessment tools, monitoring tools, and activities;
- Preparation and verification of reporting;
- Public participation techniques and citizen engagement, including public awareness creation / educational techniques (on environmental, social, and health issues); and

- Addressing systemic E&S risks in the Sierra Leone off-grid solar market through developing targeted strategic solutions.

Capacity-building efforts are needed at different levels. It has to be ensured that all authorities, institutions, and organizations involved integrate their activities within appropriate co-coordinating mechanisms in order to give consistent signals for the management of EDSA projects. The four E&S capacity building activities categories are:

- E&S capacity building for ESDA;
- E&S training and support to mini grid developers;
- Training that empowers citizen engagement; and
- Capacity building that strengthens the development of strategic solutions for E&S risk management for the off-grid solar market.

11.1 E&S Capacity Building for ESDA

Capacity building will support developing PIU and EDSA's capacities to implement a robust E&S risk management approach in their activities, as well as enhance E&S benefits and opportunities, such as gender-related activities, green initiatives, etc. The implementing agency (ESDA) has established a safeguard unit responsible for the training of individuals hired to work in the Unit, and the capacity building of those individuals will be key. The ESDA should be able to provide adequate training for its E&S staff, as well as all other staff to whom this aspect is relevant. This support will also include a budget for conducting regular monitoring activities, as well as independent E&S audits.

Additionally, environmental issues are dynamic and differ between sectors. Although the EPA-SL currently performs functions related to the ESMF roles mentioned above, the EPA-SL staff are also in need of training and further capacity building. The objective of the training program is to ensure appropriate environmental awareness, knowledge, and skills for the implementation of environmental management plans as well as environmental and process monitoring. In an effort to strengthen institutional capacity and environmental awareness, training sessions will be opened for individuals from the EPA-SL, the ESDA, and other concerned governmental agencies and ministries. Appraisal will be conducted following a training session for feedback towards improving the training program. The typical scope of the training sessions will encompass:

- Defining relevant environmental laws, regulations, and standards for each of the targeted institutions based on their responsibilities as well as current and prospective projects in the energy sector. Reviewing and discussing the World Bank's Safeguard Policies.
    - Conducting bid tenders where appropriate while ensuring that the World Bank's ESS and the applicable EPA-SL legislation and GoL laws are respected.

- E&S screening: screening of investments for potential environmental and social impacts, scoping assessments, planning mitigation options, public consultation to assess feasibility and acceptability options; step-by-step implementation of the environmental and social screening process for projects.
- Environment: site selection to minimize environmental impacts and social disruption; restoration of drainage patterns, including mitigation matters in contracts; management of impacts during construction; monitoring of the effectiveness of measures.
- Reviewing Environmental Impact Assessment methodology (at both the sub-project and strategic levels) and environmental sampling and monitoring procedures (air, noise, water, etc.).
- Introducing mitigation measures aimed at minimizing adverse environmental impacts associated with the construction and operation of energy-related projects with special emphasis on low-technology, affordable, and sustainable measures.
- Introducing the fundamentals of occupational health and safety procedures with emphasis on the risks associated with electricity production.
- Presenting case study EMPs of relevant projects, solar power energy production (power generation, solar power generation, etc.)
- Conducting an open dialogue with the targeted audience, whereby individuals will be asked to share their experiences (success stories and shortcomings) in implementing EMPs and the main technical problems faced in the field.
- Monitoring and grievance redress: transparency and supervision responsibilities.

The training program is to consist of technical assistance, likely by individual consultants, and will be targeted at individuals within primarily the ESDA and the EPA, whose main responsibilities currently or in the future will encompass environmental and social safeguards. It is proposed that the training program be implemented at least twice a year over a period of two years, roughly the period of the two current Bank-funded projects. Staff and operators of sub-projects may also be targeted as appropriate.

11.1.1 E&S Training and Support to Mini Grid Developers

This activity will build E&S capacity, as part of overall capacity strengthening, of existing mini grid developers and other private companies interested in entering the mini grid market, to identify sites viable for mini grid development. They will be provided with training and support to develop and enhance their ESMS to be able to comply with the applicable E&S requirements.

The mini grid developers should be trained in different aspects of the implementation of the ESMF and the proposed Project, including the interpretation and implementation of environmental impact management guidelines. The three major areas for anticipated training are:

- Awareness raising to fully appreciate the significance or relevance of environmental issues, as well as the sensitivity of certain issues, such as land use.
- Detailed technical training on analyzing potentially adverse environmental impacts, to prescribe mitigation approaches and measures, and to prepare and supervise the implementation of environmental and social management plans. This training will address such matters as environmental assessment, using the ESMF, and project supervision and monitoring.
- Capacity building on how to interact with host communities, such as community participation methods, both for conducting stakeholder engagement and for addressing conflicts/grievances caused by the proposed project.
- Monitoring & reporting: how to fulfill ESDA's requirement on monitoring and reporting.
- Other training that will strengthen mini grid developers' ability to improve overall project quality, such as project management, occupational health and safety, monitoring and evaluation, waste management, etc.

11.1.2 Citizen Engagement

This will support the education and awareness in specific topics like safety of the work, GRM, electricity and safety…etc. under the project's key delivery areas, namely households, small businesses, and universities. Different stakeholders affected by the project's implementation have different training needs.

The target audience of such training activities include, but not limited to: people live in and around the affected areas, people whose land and/or livelihood might be affected by the projects, people who benefit from the newly build mini solar grids, buyers/potential buyers of the standalone solar system, students and faculties in the beneficiary universities and teaching hospitals, etc.

The activities here are proposed to address the following:

- Initial reservation in the adoption of a new technology for communities and households (for both solar mini-grids and SHS);
- Buyer's inability to make informed purchasing decisions and decipher quality in the market;
- Importance and advantages of conserving energy;

- Environmental and social awareness for solar technologies, such as recycling/ proper disposal of batteries.

The capacity-building activities will equally prioritize men and women as a prime target audience. It is in the project's interest to reach women who will be the end users of the proposed solar solutions. Capacity development for community facilitators and field-level staff will also be implemented because they are the ones who will reach out to the communities, and it becomes necessary for these staff and representatives to be well-grounded with adequate information on the project. They will be able to communicate effectively in the local languages, understanding community dynamics and processes, negotiation, and conflict resolution, and empathizing with communities and their needs. Building trust and maintaining good rapport with the people in the Project areas by providing relevant information on the project and responding effectively to their needs and concerns will help solve issues before they even become grievances. It is also important that the community facilitators and field-level staff provide feedback to the ESDA.

11.1.3 Capacity Building that Strengthens the Developing Strategic Solution for E&S Risk Management for the Off-Grid Solar Market

This category of activities will support developing programmatic approaches to address key strategic challenges faced by players beyond the direct stakeholders of this project.

Beyond the specific E&S due diligence at the level of mini grid sites and developers, SHS distributors, and private sector contractors for the three program components, some of the identified E&S risks require strategic solutions at the market/ sector level. Therefore, capacity training targeting a broader scope of audience, including policy makers, industry practitioners, domestic and international financiers, and other key players in Sierra Leone 's solar energy sector.

- Land issues and competing land use challenges for mini grids;
- Waste management, and more specifically, battery storage and recycling; and
- Need for harmonization of E&S standards among private mini grid developers and their financiers.

In sum, capacity building should be viewed as more than training. It is human resource development and includes the process of equipping individuals with the understanding, skills, and access to information, knowledge, and training that enable them to perform effectively.

To achieve the goal of the ESMF, there is an urgent need for capacity building and strengthening of relevant competencies on environmental and social management at the PIU, relevant agencies, and community levels, including contractors. To this end, capacity building should be viewed as more than training. It is human resource development and includes the process of equipping individuals with the understanding, skills, and access to information, knowledge, and training that enable them to perform effectively. It also involves organizational development, the elaboration of management structures, processes, and procedures, not only within organizations but also the

management of relationships between the different organizations and sectors (public, private, and community).

Given the nature of the environmental and social management requirements and provisions outlined in this ESMF, competencies and capacity building will be required in the following areas:

- Environmental Impact Assessment Process - Screening, scoping, impact analysis, mitigation measures, and monitoring, reviewing EIA Reports'
- Environmental Due Diligence - Types of due diligence, screening projects for liabilities, scoping due diligence investigations, and reviewing due diligence reports.
- Monitoring and Evaluation - Understanding the importance of M&E in project implementation, M&E requirements for environmental and social sustainability of projects.

Table 18: E&S Capacity building activities and estimated costs

Activity	Description	When	Training to be conducted by who	Estimated Budget
Strengthening PIU and Rural Electrification Agencies' E&S capacity	This will support developing ESDAs' capacity to implement a robust E&S risk management approach in its activities, as well as enhance E&S benefits and opportunities (such as gender-related activities, green initiatives, etc.). ESDA should be able to provide adequate training for its E&S staff, as well as other staff to whom this aspect is relevant. This support will also include a budget for: • training of RCU and PIUs E&S staff • hiring an E&S firm to assist in building E&S systems for the project. • conducting regular E&S monitoring activities (both directly by RCU, PIUs, and third-party monitoring by a specialized NGO or other similar entity) • commissioning independent E&S audits • hiring a gender expert.	During project implementation	External Consultant	$160,000
Design and implementation of a GM	Design and implementation of a GM at the ESDA level and integrating it at various levels of the project.	Before project implementation	External Consultant	$100,000
Developing strategic solutions for E&S risk management for the off-grid solar market	This will support developing programmatic approaches to address key strategic challenges identified, which are (i) land issues and competing land use challenges for mini grids; (ii) waste management, and more specifically, battery storage and	Throughout the project lifecycle	EDSA/Consultant	$160,000

Activity	Description	When	Training to be conducted by who	Estimated Budget
	recycling; (iii) the need for harmonization of E&S standards among private mini grid developers and their financiers			
4a. Battery recycling	Waste management, and more specifically, battery storage and recycling, and the need for harmonization of E&S standards among private mini grid developers and their financiers.			TBD
4b. Land acquisition and resettlement	Land issues would be addressed through building strategic engagements with relevant regulatory agencies and bringing them together with private sector mini grid developers to develop sustainable models for land willing seller-willing buyer, including stakeholder engagement with communities			TBD
4c. Policy/ standards harmonization	Multi-stakeholder dialogue on harmonization of E&S standards and regulatory environment for mini grid developers			$25,000
Community engagement and sensitization campaigns	Support education and awareness under the project's key delivery areas: households, small businesses, and universities. The initiative will address the following: (i) initial reservation in the adoption of a new technology for communities and households (for both solar mini-girds and SHS); (ii) buyer inability to make informed purchasing decisions and decipher quality in the market; (iii) importance and advantages of conserving energy; and (iv) environmental and social awareness for solar technologies, such as recycling/ proper disposal of batteries.	Throughout the project lifecycle	EDSA	$60,000

Activity	Description	When	Training to be conducted by who	Estimated Budget
	The initiative will equally prioritize men and women as a prime target audience. It is in the project's interest to reach women who will be the end users of the proposed solar solutions. This will also include citizen engagement surveys.			
Gender actions implementation	Implementing a gender strategy for the project, with the following core gender actions: For mini grid development, exploring entry points to enhance women's participation and productive uses of energy in mini-grid operations to increase the sustainability of operations. For SHS component, taking action for women to be engaged as valuable partners along the entire value chain—design, marketing, sales, and after-sales services. GBV prevention and mitigation, and monitoring.	During project implementation	Consultant	$70,000
Total				$ 575,000

12 INFORMATION DISCLOSURE

12.1 Public Consultation Requirements of the ESIA Process

According to Sections 17 and 18 of the Environmental Protection and Management Law and World Bank ESS10, public consultations are an integral component of the ESFM and ESIA requirements, and the guidelines identify the following principal elements:

- Developers are required to conduct public consultation during the preparation of ESlAs.
- The formal ESIA document is made available for public review and comments.
- Documents to which the public has access include Project Briefs, ESIA terms of reference, draft and final ESIA reports, and decisions of the appropriate authorities regarding project approval.

The implementing agency (ESDA) is required to conduct public consultations in beneficiary and affected communities in order to identify key issues and determine how the concerns of all parties will be addressed in response to the terms of reference for the ESIA. Hence, in keeping with the public consultation requirement of the ESIA process, stakeholder consultation meetings are to be conducted with various groups identified in the project area.

The main objectives of the consultation are to introduce the proposed project to stakeholders, solicit inputs from stakeholders on the design of the project, and gain their support for the project. Consultations will be continued throughout the project life cycle.

Stakeholders will be allowed to access public project information in Sierra Leone (on the website of the ESDA) and on the World Bank external website at any time. Stakeholders will also be consulted during the preparation of subsequent environmental and social instruments, such as the ESIA and the SEP, among others. Involvement of stakeholders in the preparation of ESIA will start with the launch of the ESIA process and continue throughout its preparation and implementation. Detailed below are the different requirements of stakeholder consultations throughout the ESIA process.

After the submission of an application for an environmental impact assessment permit, the project proponent should publish a “notice of intent” that states the information that may be necessary to allow the stakeholders or any interested party to identify their interest in the proposed project or activity. This information should include: the nature of the project, its related activities, its timeframe, and its site of operation, and the area that may be impacted.

Before preparing the ESIA document, the project proponent would conduct public consultations with the potential affected stakeholders. This procedure is called the “scoping process,” which aims to: 1) inform the stakeholders about the project’s details, its potential impacts on the physical, biological, and socio-economic environments, and the mitigation measures that can be

taken to minimize these impacts, and 2) get the stakeholders' input on the various related issues. By achieving this, the scoping process is also a guiding tool for the project proponent and its consultants. It helps them in identifying the project's impacts, mitigation measures, and alternatives, which will form the essential part of the ESIA document. The scoping process consists of publishing the project's details in the affected district's media, holding public meetings to consult directly with the affected communities and stakeholders, and incorporating the views of these stakeholders in the scoping report, which is submitted to the EPA-SL.

On the completion of the ESIA study report, the public is invited again to participate in the ESIA review through public consultation meetings. The public's views on the ESIA are taken into consideration by the EPA-SL when deciding whether to approve or reject the project. In some cases, the

EPA-SL may also decide to hold a public hearing about the project in order to enhance public participation. Those cases may include but are not limited to requests by the public for a public hearing, controversy about the project, or expiry of the period stipulated for receipt of comments.

12.2 Process for Public Consultation in the ESMF

In view of the scope of interventions along with provisions under the Bank's ESS1 requirements, the proposed project's inherent environmental and social risks and impact are rated Substantial. As such, an inclusive draft of the Stakeholder Engagement Plan (SEP) has been prepared. The SEP includes a Grievance Mechanism (GM) to ensure the inclusion and non-discrimination of vulnerable groups. The SEP shall identify all key existing and potential stakeholders, and will describe, among others, their level of interest, influence, and support for the project and in its planning and implementation. It describes means, timelines, and frequency of communication with each stakeholder/stakeholder group, grievance mechanisms to be deployed, and monitoring and reporting. The SEP shall be disclosed in-country and at the Bank prior to project Appraisal. Together with the ESIA/ESMPs and the LMP, the SEP will form part of the environmental and social management instruments of the project.

The SEP will ensure that the project carries out meaningful consultations with various stakeholders (including project-affected communities, women and youth groups, NGOs, line ministries, community-based groups, and other vulnerable and disadvantaged members of the communities throughout the project life cycle. Stakeholders will be provided with an accessible and inclusive GM to raise issues and grievances, which will allow ESDA to receive, respond to, facilitate the resolution of concerns, and manage grievances. The ESDA will ensure that all stakeholder consultations are accessible and inclusive (in format and location), and that these consultations will be appropriate for the local context. Such stakeholders will be provided with timely, relevant, and understandable information in a culturally appropriate format. Overall, the consultations would:

- Learn about the community needs and preferences with respect to the project objectives;

- Identify and agree on options that have relatively less impact on affected people
- Discuss the environmental and social risks and impacts that might be associated with the suggested options, along with the impact mitigation guidelines and measures adopted in the ESMF;
- Discuss compensation plans;
- Have the community identify grievance redress mechanisms for resolving project design and implementation concerns;
- Determine the main pillars of a communication/consultation strategy that will be adopted throughout the project phases, and
- Determine options for engaging the local community and NGOs in the operation.
- The public participation should also aim to increase general environmental awareness among the public and various stakeholders regarding the proposed project and thereby addressing their concerns. Additional reasons for involving the public include:
- Public participation is regarded as proper and fair in public decision-making activities.
- Public participation is widely accepted as a way to ensure that projects meet the stakeholders' needs and are suitable for the affected public.
- The project carries more legitimacy and less hostility if potentially affected parties can influence the decision-making process.
- The final decision is 'better' when local knowledge and values are included and when expert knowledge is publicly examined.
- The effectiveness of public participation is measured by the degree of communication, the intensity of contact, and the degree of influence on decision-making.

During the Project and the SEP, public consultations should be carried out with the following stakeholder groups.

12.2.1 Government and regulatory agencies

Ministry of Finance and Development Planning

The Ministry of Energy

Ministry of Land and Country Planning

The Ministry of the Environment

Ministry of Public Works

Ministry of Internal Affairs

Ministry of Agriculture

Electricity Generation and Transmission Company

The Electricity Distribution and Supply Authority

Environment Protection Agency - Sierra Leone

The Electricity and Water Regulatory Commission

Nuclear Safety and Radiation Protection Authority

12.2.2 Non-Governmental Organizations

- Civil society organizations
- Community-based organizations

12.2.3 Local Community stakeholders

- Local leaders
- People living near facilities to be constructed by the project
- People whose land is acquired by the project
- People whose livelihoods are affected by the project

12.2.4 Disadvantaged and vulnerable groups

- Elderly
- Individuals with chronic diseases and pre-existing medical conditions
- Persons with disabilities
- Children with special needs
- Women/girls
- Orphans

The SEP shall be disclosed in-country and at the Bank prior to project Appraisal. After the World Bank board project approval, the SEP is expected to be revised and updated within 30 days of the project's effectiveness date and continuously updated throughout the project implementation period when required.

13 ESMF Implementation Budget

Environmental and social mitigation measures have a cost. Below is a preliminary cost estimate, based on a proxy energy project in Liberia and in Nigeria with similar E&S requirements. The scopes of subprojects and their sites are yet to be known, and that creates uncertainty in regard to estimating costs for E&S management and monitoring. The ESMF shall ideally be updated within three months of project effectiveness. The estimated budget is US$ 1795,700.

Table 19: Estimated Budget to Implement ESMF

Activities	Unit	No. of Units	Unit Cost (US$)	Extended Cost (US$)	Comments
Salaries for three (3) E&S Specialists, including GBV at ESDA	Months	60	12,000	720,000	Salaries will be subject to contract renewal based on satisfactory performance and adjusted yearly, taking into account inflation rates throughout project implementation.
Salaries for recruiting three (3) E&S support staff at ESDA	Months	60	1,850	410,700	Salaries will be subject to contract renewal based on satisfactory performance
Capacity building for E&S staff of EGTC, ESDA, MME, EPA, DRE companies, and civil society	L/S	5	115,000	575,000	An estimated 30 trainees from the four institutions for a period of 5 years.
Preparation of the training manual, including the cost of reproduction	L/S	1	15,000	15,000	
Disclosure, implementation & Monitoring of safeguards	L/S	1	15,000	75,000	
Total Cost US$				1795,700	

14 ANNEX

14.1 Annex 1: List of protected area

Number of protected areas	Type WDPA	Category UICN (WDPA)
Sierra Leone River Estuary	Terrestrial and Inland Waters Protected Areas	Not Reported
Bojeni Hills Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Dodo Hills Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Farangbaia Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Freetown Water Works Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Gboi Hills Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Kambui Hills Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Kambui North Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Kambui South Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Kangari Hills Forest Reserve	Terrestrial and Inland Waters Protected Areas	VI
Kasewe Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Kuru Hills Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Lalay Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Malal Hills Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Nimini South Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Occra Hills Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Singamba Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Tama Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Tonkoli Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported

Number of protected areas	Type WDPA	Category UICN (WDPA)
Waterloo Forest Reserve	Terrestrial and Inland Waters Protected Areas	Not Reported
Gola Rainforest National Park	Terrestrial and Inland Waters Protected Areas	Not Reported
Outamba Kilimi National Park	Terrestrial and Inland Waters Protected Areas	Not Reported
Western Area Peninsula National Park	Terrestrial and Inland Waters Protected Areas	II
Tiwai Island Sanctuary	Terrestrial and Inland Waters Protected Areas	IV
Loma Mountains National Park	Terrestrial and Inland Waters Protected Areas	II
Tingi Hills Forest Reserve	Terrestrial and Inland Waters Protected Areas	II
Wetlands / MPAs (Yawri Bay, Sherbro River Estuary, Scarcies River Estuary)	Marine Protected Areas / Terrestrial and Inland Waters Protected Areas	Not Reported

14.2 Annex 2: Sample TOR for the Engagement of an ESIA Consultant

PROJECT TITLE

DATE

I. Introduction and Background

This part will be completed at the appropriate time and should provide the necessary information on the context and methodological approaches to be undertaken.

II. Objectives of the study

This section will show (i) the objectives and activities of the project under the Project, and (ii) identify activities that may have environmental and social impacts and require appropriate mitigation measures.

III. The Consultant's Terms of Reference

The consultant's mandate will be to:

Conduct a description of the biophysical characteristics of the environment in which the Project's activities will take place and highlight the major constraints that need to be taken into account at the time of site preparation, construction, and during the installation of equipment, and during the time of operation.

- Assess the potential environmental and social impacts due to project activities and recommend appropriate mitigation measures, including cost estimates.

- Assess the needs for solid and liquid waste collection, disposal, and management in infrastructure, and make recommendations.

- Conduct a review of environmental social policies, legislation, and administrative and

  institutional frameworks; identify any gaps that may exist and make recommendations to address them in the context of the Project's activities

- To examine the conventions and protocols to which Sierra Leone is a signatory in relation to the activities of the Project

- Identify the responsibilities and actors to implement the proposed mitigation

  measures.

- Assess the available capacity to implement the proposed mitigation measures, and make appropriate recommendations, including training and capacity-building needs and their costs.

- Prepare an Environmental Management Plan (ESMP) for the project. The Government of Sierra Leone shall identify (a) the potential environmental and social impacts resulting from the project activities, taking into account the mitigation measures contained in the ESMF Mitigation Checklist; (b) the proposed mitigation measures; (c) institutional responsibilities for the implementation of mitigation actions; (d) monitoring indicators; (e) institutional responsibilities for monitoring the implementation of mitigation actions; (f) the cost estimate for all such activities; and (g) the timetable for the implementation of the ESMP;

- Public consultations. The results of the environmental and social impact assessment and the proposed mitigation measures will be shared with the public, NGOs, local government and the private sector working in the area where the activity will be carried out. The minutes of this consultation should be an integral part of the report.

IV. Outline of the report

For the drafting of the ESIA report and its content, the consultant will have to prepare:

- A presentation of the project and the developments, structures and works to be carried out, the justification for the choice of techniques and means of production, as well as its location.

- An analysis of the initial state of the site, and of its environment, including the natural resources of the soil and subsoil, the atmosphere, the agricultural, pastoral, maritime, coastal or leisure areas, the cultural sites and landscapes, and the socio-economic infrastructures affected by the project.

- This analysis of the initial state of the site, in the event of the existence of negative impacts on the environment linked to a previous activity that the former

proponent has not remedied, must describe, quantify and evaluate these impacts prior to the activity that is the subject of the study or the impact notice and the conditions under which the site is in its current state. This assessment must be the subject of a second expert opinion by the Minister for the Environment and the Minister concerned by the activity.

- An analysis of the direct and indirect impacts on the site and its environment relating to the natural resources of the soil or subsoil, the atmosphere, agricultural, pastoral, maritime and coastal or recreational areas, cultural sites and heritage and landscapes, forest and hydraulic resources, safety, hygiene, sanitation and public health and biological balances and, where appropriate, the convenience of the neighborhood (noise, vibrations, odors, biological emissions, etc.) likely to be affected by the works, developments or structures.

- A description of the possible risks to the environment outside the national territory of the planned activity.

- A description of the gaps in technical and scientific knowledge as well as the uncertainties encountered in the development of the necessary information.

The Environmental Management Plan outlining the necessary measures, whether or not planned by the promoter, to eliminate, reduce, and compensate for the harmful consequences of the project on the environment, as well as the estimate of the corresponding expenditure. This plan must necessarily include:

- A clear definition of measures planned by the proponent to eliminate/reduce and compensate for the adverse environmental impacts of the project.

- Damage figures and pollutant emission rates into the ambient environment

- The execution schedule.

- An estimate of expenses.

A numerical indication of the expected results in terms of pollution level or nuisance threshold, and at the same time, the legal standards or practices accepted in similar cases.

This Environmental Management Plan must be the subject of an annual declaration by the promoter. This statement must cover the operation of the Plan, the internal audits and the corrective actions taken or to be taken to complete the Plan. This declaration is subject to the approval of the Minister for the Environment, who reports the results to the Minister concerned by the activity.

- A non-technical summary relating to the previous sections intended for the information of the public and decision-makers.

For the authorization of certain activities, a Site Rehabilitation Plan must be drawn up. This Plan must provide, in support of a financial guarantee from a bank represented on Sierra Leonian territory, the terms of the restoration and any special developments subsequent to the activity as well as the damage caused by an environmental accident in the event of technical failure or negligence on the part of the developer. This restoration can be considered either as the work progresses or at the end of the project. These activities are:

- The construction and/or opening of a household waste disposal site.
- The construction and/or opening of a hazardous waste disposal site.
- The construction and/or opening of landfill sites for hazardous waste

The construction and/or opening of a chemical factory.

The environmental impact assessment report must be presented according to a plan.

V. Profile of the consultant

The consultant must have extensive experience in the environmental assessment of projects.

VI. Working hours and specialization

The duration of the study will be determined according to the type of investment

14.3 Annex 3: Template for Waste Management Plan

TEMPLATE FOR A WASTE MANAGEMENT PLAN FOR A RENEWABLE ENERGY PROJECT:

1. Introduction
- *Briefly explain the purpose and scope of the waste management plan for the renewable energy project.*
- *Identify the organization responsible for implementing the plan.*

2. Goals and Objectives
- *Define the goals and objectives of the waste management plan.*
- *Explain how the plan aligns with any relevant laws or regulations.*
- *Each phase of the project: preparation, construction, operation and decommission should be specified in this plan.*
- *Timelines and budget are to be included as well*

3. Waste Streams
- *Identify the types of waste generated by the renewable energy project (e.g. construction waste, equipment waste, hazardous waste).*
- *Describe how each waste stream will be managed.*

4. Collection and Transportation
- *Describe the methods used for collecting, quantifying and transporting waste from the project site.*
- *Explain how the waste will be segregated and stored prior to collection.*

5. Treatment and Disposal
- *Describe the methods used for treating and disposing of the waste.*
- *Explain how the waste will be disposed of in compliance with relevant laws and regulations.*
- *Identify any opportunities for recycling or reusing materials generated by the renewable energy project.*

6. Monitoring and Reporting
- *Explain how the waste management plan will be monitored and evaluated for effectiveness.*
- *Describe the methods used for reporting on the progress of the plan.*

7. Education and Training
- *Describe the education and training programs that will be implemented to ensure compliance with the waste management plan.*
- *Identify the target audiences for these programs.*

8. Conclusion
- *Summarize the key points of the waste management plan for the renewable energy project.*
- *Provide any necessary acknowledgements.*

Note that this is just a basic template, and you may need to modify it to suit your specific needs and requirements. Also, depending on the complexity of your renewable energy project, you may need to provide additional details and sections to the plan.

14.4 Annex 4: Sample ToR for Development of a Health and Safety Template

1. INTRODUCTION

2. OBJECTIVES OF CONSULTANCY

The objectives of this consultancy are to:

- Create a template document to develop their own Health and Safety Plan
- Create this document in compliance with the relevant aspects of the World Bank ESS and the country National Environment Act

3. SCOPE OF WORK

This Consultancy will require the engagement of a consultant with a background in Disaster Management, Business Management and Plan Development/Project Management. The use of digital conversion methods of the layout and production of the template are expected.

The Consultant will be required to:

a) Develop content for the Health and Safety Plan Template for Businesses

b) Provide appropriate formatting and simplified language that can be accessed and understood by a wide range of persons

c) Provide an easy-to-follow layout of the Template for business

d) Facilitate a local consultation with approved stakeholders to test and evaluate

the Health and Safety Plan Template for Businesses; and

e) Finalize the Health and Safety Plan and prepare for handover to PIU and RCU

More specifically, the Consultant will:

3.1 Prepare an Inception Report with a Work Implementation Plan that demonstrates a clear understanding of the assignment, detailing:

i. The Proposed Work Schedule with timelines and methodology

ii. Proposed Budget; and iii. List of materials or resources required for the Consultancy.

3.2 Review and research relevant literature to support the development of suitable content for the Health and Safety Plan

3.3 Prepare activities for inclusion in the Health and Safety Plan for the project with guidance and input from relevant stakeholders

3.4 Enhance and finalize the Health and Safety Plan for the project through a process that includes:

i. Consultation with all stakeholders, contractors, the Ministry of Environment, the Ministry of Labor, local authorities, private sectors

ii. There should be direct referencing to the World Bank relevant ESS, the Labor Code of the country, Health, Safety and Welfare

iii. The selection of formatting that allows the plan to be processed and accessed by a wide variety of media/technology

iv. Testing of the plan using an Exercise/discussion/debate that challenges/examines the versatility of the plan by introducing a wide variety of possible approaches and clients

v. Presentation of the Final plan to the employer

4. DELIVERABLES

4.1 Inception Report with Work Implementation Plan

4.2 Pre-final Draft for testing

4.3 Comments coming out of the discussion designed to test the plan

4.4 Final Health and Safety Plan

5. **INPUTS OF THE EMPLOYER:** The Rural Electrification Agencies will provide:

i. Relevant literature or documentation that the Consultant may require

ii. Technical comments and feedback on the output of the Consultancy

iii. Logistical support for convening meetings

iv. General oversight in the roll out of the consultancy

v. Relevant literature or documentation that the Consultant may require

vi. Technical comments and feedback on the output of the Consultancy

6. CONSULTANT PROFILE

The Consultant should have the following skills:

Qualifications and Experience:

1. A minimum of Seven-Ten10 (7-10) years of experience in Emergency Response/Disaster Management

2. A minimum of five (5) years of experience in Safety, Environmental Management or a related field

3. A minimum of five (5) years of experience in Health and Safety, and Environment (HSE) Plan Development/Project Management, or a related field.

Knowledge and Skills:

1. Demonstrated knowledge and skills in the facilitation of stakeholder consultation

2. Demonstrated analytical and research skills in the field of Disaster Management/Emergency Response; 3. Demonstrated knowledge of the World Bank ESS and local labor procedures in general

4. Ability to manage assignments effectively – consistently ensuring timeliness and quality of work with minimum supervision

5. Strong communication, documentation and presentation skills. The Technical Proposal should indicate at minimum:

1. Proposed approach to be taken for the rollout of the consultancy

2. Evidence of stakeholder participation in the development of the proposed documents

3. Timelines and methodology

4. Curriculum Vitae of consultant and for each member of the team (if a team approach is utilized). Note: The financial proposal should have a detailed budget breakdown with man days for each team member identified.

7. INDICATIVE TIMEFRAME

Health and Safety plans		**Time frame** (weeks/months) (w – weeks, m =month)
1	Inception report	2 weeks
2	Research/stakeholders' consultations	1.5 month
3	Content, Layout, Design of the plan	1 month
4	Consultation with employer and presentation	2 weeks
5	Presentation of final Report	1 week
Total 3 months and 3 weeks		

Note: All other expenses are to be included in the financial report.

8. DURATION

The Consultancy is estimated to be no more than 4 months in total

9. APPLICATION

Interested persons should submit a proposal based on the Terms of Reference outlined.

above complete with:

i. Full Curriculum Vitae (with two professional references)
ii. Proposed work schedule and description of approach/methodology for performing the assignment.
iii. Demonstrated knowledge and skills in stakeholder participation techniques, as well as strong communication, documentation, and presentation skills.
iv. A Technical Proposal should be submitted to include at minimum the proposed approach to be taken to roll out the consultancy, evidence of stakeholder participation in the proposed documents, timelines, and Curriculum Vitae of the consultant and for each member of the team (if a team approach is utilized)

14.5 Annex 5: Sample Grievance Register Form

Name (Filer of Complaint): _____

ID Number: _____ (PAPs ID number)

Contact Information: _____ (Village; mobile phone)

Nature of Grievance or Complaint:

_____

_____

Date	**Individuals Contacted**	**Summary of Discussion**
_____	_____	

Signature: _____ Date: _____

Signed (Filer of Complaint): _____

Name of Person Filing Complaint: _____ (if different from Filer)

Position or Relationship to Filer: _____

Review/Resolution

Date of Conciliation Session: _____

Was Filer Present?: Yes No

Was field verification of complaint conducted? Yes No

Findings of field investigation: _____

_____

_____

Summary of Conciliation Session Discussion: _____

_____

_____ Issues _____
_____

Was agreement reached on the issues? Yes No

If agreement was reached, detail the agreement below:

_____

If agreement was not reached, specify the points of disagreement below:

_____

Signed (Conciliator): _____ Signed (Filer): _____

Signed: _____

Independent Observer

Date:_____

14.6 Annex 6: Environmental and Social Screening Checklist

The Environmental and Social Screening (ESSC) checklist has been designed using the World Bank Environmental and Social Standards, as checklist benchmarks to assist in the evaluation of proposed sub-projects under the RCU and PIUs. The checklist is designed to place information in the hands of reviewers so that mitigation measures, if any, can be identified and/or that requirements for further environmental analysis be determined. The ESSC also identifies potential socioeconomic impacts that will require mitigation measures.

Table III-1. Environmental and Social Screening Checklist

Issues		**Site Sensitivity**		**Responsibilities**
	Low	**Medium**	**High**	
Natural Habitats	No natural habitats are present	No critical natural habitats; other natural habitats occur	Critical natural habitats present	RCU, PIUs Contractors
Water quality and water resource availability and use	Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues	Intensity of water use; multiple water users; water quality issues are important	Intensive water use; multiple water users; potential for conflicts is high; water quality issues are important	RCU, PIUs Contractors
Natural hazards vulnerability, floods, soil stability/	Flat terrain; no potential stability/erosion problems; no known volcanic/seismic/ flood risks	Medium slopes; Some erosion potential; medium risks from volcanic/seismic/ flood/ hurricanes	Mountainous terrain; steep slopes; unstable soils; high erosion potential; volcanic,	RCU, PIUs and Independent Consultants

erosion			seismic, or flood risks	
Cultural Property willing seller-willing buyer	No known or suspected cultural heritage sites Low population density; dispersed population; legal tenure is well-defined water rights	Suspected cultural heritage sites; known heritage sites in broader area of influence tenure; well-defined water rights	Known heritage sites in projects are Land issues, High population density; major towns and villages; low-income families and/or illegal ownership of land; communal properties; unclear water rights	RCU, PIUs Contractors

1. Site Selection:

When considering the location of a sub-project, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They do indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate, or manage potential effects

2. Checklist questions:

Physical data: *Yes/No answers and bullet lists preferred except where descriptive detail is essential.*

Site area in ha

Extension of or changes to existing alignment

Any existing property to transfer to sub-project

Any plans for new construction

Preliminary Environmental Information:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*	
State the source of information available at this stage (i.e., proponent's report, National Environment Agency, or other environmental study)		
Has there been litigation or complaints of any environmental nature directed against the proponent or sub-project?		
Identify types of activities and likely environmental impacts:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*	
What are the likely environmental impacts, opportunities, risks, and liabilities associated with the sub-project?		
Determine environmental screening category:	*Bullet lists are preferred except where descriptive detail is essential.*	
After compiling the above, determine which category the subproject falls under based on the World Bank environmental categories (High, Substantial, Moderate and Low) and the National Environment Act of the countries of this phase of the Program.		
Mitigation of Potential Pollution:	*Yes*	*No*
Does the sub-project have the potential to pollute the environment or contravene any environmental laws and regulations?		

Will the sub-project require pesticide use?		
If so, then the proposal must detail the methodology and equipment incorporated in the design to constrain pollution within the laws and regulations and address pesticide use, storage, and handling		
Does the design adequately detail mitigating measures?		
Environmental and Social Assessment Report on environmental and social studies required:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential*	
If screening identifies environmental and social issues that require an ESIA or a study, does the proposal include the ESIA or study?		
Indicate the scope and time frame of any outstanding environmental study.		
Required Environmental Monitoring Plan:		
If the screening identifies environmental issues that require long-term or intermittent monitoring (e.g., effluent, gaseous discharges, water quality, soil quality, air quality, noise), does the proposal detail adequate monitoring requirements?		
Public participation/information requirements:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*	
Does the proposal require, under national laws, the public to be informed, consulted, or involved?		
Has consultation been completed?		
Indicate the time frame of any outstanding consultation process		
Land and resettlement: only land donation and willing seller-willing buyer options are considered for DARES	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*	

What is the likelihood of land purchase for the sub-project?	
How will the proponent go about land purchase?	
What level or type of compensation is planned?	
Who will monitor actual payments?	
Actions:	
List outstanding actions to be cleared before sub-project appraisal	
Approval/rejection	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
If proposal is rejected for environmental reasons, should the sub-project be reconsidered? What additional data would be required for re-consideration?	

14.7 Annex 7: Waste and Batteries Disposal Management Approach

In Africa, many countries and communities are already struggling with contaminated sites and soil pollution from unregulated car battery recovery and recycling. Unsound end-of-life management and recycling can cause severe and even fatal lead poisoning of people working in the battery recycling sector. The health of people living around small and industrial scale leads to smelters, in particular children, is severely impacted for life. A recent report by the Lead Recycling Africa Project revealed that every year, more than 1.2 million tons of used lead-acid batteries and 800,000 tons of lead require sound management in Africa.

Environmentally, when disposed of alongside household trash, batteries end up in landfills/waste dumps. As the battery casing corrodes, chemicals leak into the groundwater from where they contaminate the water bodies. Acid and lead particulates also contaminate the soil and become airborne when dry. Health-wise, cadmium and nickel are known human carcinogens, lead has been linked to birth defects and to neurological and developmental damage, and mercury is also highly toxic, especially in vapor form. Excessive levels of lead can affect a child's growth, cause brain damage, harm kidneys, impair hearing and induce behavioral problems, and in adults, lead can cause memory loss and lower the ability to concentrate as well as harm the reproductive system.

To regulate waste management of such toxic substances, on the international level, the Basel Convention11 is very important. Furthermore, the Secretariat of the Basel Convention has set up guidelines for the safe treatment of used lead acid batteries. Drawing on the principles of environmentally sound management, the convention seeks to protect human health and the environment from the risk posed by hazardous waste. This will require changing the economic equation for waste in order to motivate the producers of hazardous waste and people who benefit from the associated goods to act. To do this, the convention sets out a three-steps strategy (UNEP 2002):

1. Minimizing the generation of waste.
2. Treating waste as near as possible to where it was generated.
3. Minimizing international movements of hazardous waste.

The Technical Guidelines for the Environmentally Sound Management of Waste Lead-acid Batteries (source: www.basel.int) offer managers a set of best practices and principles for setting up effective systems for recycling batteries. They describe how to collect, transport and store used batteries; give specifications for the storage chambers and transport facilities; describe how batteries delivered to the recycling plant should be drained of their electrolytes, identified, segregated, and stored; explain how the recovered lead must be refined in order to remove unwanted contaminants; and address medical issues and public awareness. The Guidelines conclude that the most effective approach to collection is to rely on manufacturers, retailers, wholesalers, and service stations to retain old batteries at the time new ones are provided to the customer.

Generally speaking, good practice of lead-acid battery recycling includes:[12]

- Segregated work areas, so that process areas do not contaminate non-process or eating areas
- Comprehensive Health and Safety Polices
- Medical surveillance for all operating personnel exposed to lead operations.
- Waste water treatment facilities
- Emission control procedures

[11] http://www.worldwidehelpers.org/wwhweb/uploads/files/KnO-100398_Recycling%20batteries.pdf

[12] http://www.ilmc.org/Presentations/ABC/Recycling%20Used%20Lead%20Acid%20Batteries%3B%20A%20Model%20Life%20Cycle%20Approach.pdf

- Solid Waste Management of all smelting by-products and residues.
- A community outreach program that keeps the surrounding population aware of the secondary lead operations through effective two-way communications.

World Bank provides general guidance on waste recycling and reuse in its Environmental, Health, and Safety Guidelines. The following elements should be considered during battery recycling:

- Evaluation of waste production processes and identification of potentially recyclable materials
- Identification and recycling of products that can be reintroduced into the manufacturing process or industry activity at the site.
- Investigation of external markets for recycling by other industrial processing operations located in the neighborhood or region of the facility (e.g., waste exchange)
- Establishing recycling objectives and formal tracking of waste generation and recycling rates
- Providing training and incentives for employees in order to meet objectives.

The National Environment Agencies should formally certify battery recyclers, so the developers can bring used batteries to more regulated places. It should also provide a platform to connect the recyclers and the developers. Other suggested regulatory policies include:

- Enforce a ban on export of battery plates and crude lead ingots (scrap metals);
- Control indiscriminate processing of used batteries; and
- Control dumping of substandard batteries, especially Chinese ones.

Some developed countries and areas have comprehensive battery recycle regulations that can be learned form, such as:

- Channel Islands: In early 2009 Guernsey took the initiative by setting up the Longue Hougue recycling facility which among other functions offers a drop-off point for used batteries so they can be recycled off island.
- United Kingdom: An EU directive on batteries that came into force in 2009 - Requires Producers to pay for the collection, treatment, and recycling of batteries.
- North America: The rechargeable battery industry has formed the Rechargeable Battery Corporation (RBRC), which operates a free battery recycling.

- European Union: In 2006 the EU passed the Battery Directive - one of the aims is a higher rate of battery recycling. The EU directive gave targets of 25% for 1st year, 45% after another 4 years.

For PIUs and RCU to better assist their National Environment Agencies and DARES participating in mini grid developers and SHS distributors to recycle used solar panel batteries, it should:

- Conduct research by administering questionnaire on the issue of solar panel lead-acid battery usage and recycling in the respective countries
- Actively engage with National Environment Agencies on the regulatory side to improve national level regulations/policies, more specifically, to establish safe/ certified recycling facilities, regulations for recyclers (in 2-3 years when first wave of batteries come)
- Establish RCU and PIUs' own standard / guideline for led acid battery recycling, including articulated standard for what is "safe recycling" based on international guidelines
- Develop a list of approved recyclers and request mini grid developers that are part of WB-supported program to use only those; and
- Articulate and support steps for capacity building of recyclers.
- RCU and PIUs must see that SHS batteries must be Organization for Standardization (ISO) certified by the Standard Organization
- Ensure SHS contractors must have ability to protect their workers, hence, make sure they show proper storage facilities for batteries and other solar components.

14.8 Annex 8: Sample Questionnaire for Lithium-Ion Batteries Management

Name of Respondent:

Location:

Phone Number:

1. **QUANTITIES AND COSTS OF LIBs:**

A. How many LI Batteries do you need to power a solar panel?
B. How do you intend to process used LI batteries?
C. How much do you buy?
D. Do you supply others in the sector?
E. How do you sell and to whom?
F. How are LI batteries delivered to you?
G. How are they Transported and what is your storage capacity?
H. How much does it cost to store LIB?

2. **END PRODUCT OF LIB RECYCLING:**

A. What products do you intend to extract from the LI battery?
B. Do you have an established process that could be applied?
C. Do you intend to sell the end product locally or internationally?
D. To whom do you intend to sell these end products?

3. **HEALTH, SAFETY AND POLLUTION CONTROL**

A. Would you consider this business dangerous to your health and environment?
B. How long have you been in this business?
C. Have you observed any health challenges?
D. What other waste does the business produce?
E. How do you intend to dispose of or manage the(se) other waste(s)?

4. **WILLINGNESS TO INNOVATE AND MODERNIZE**

A. Do you think your current practice meets international best practice?
B. Are you in discussion with your supplier about a buyback mechanism?
C. What aspects of your business, particularly the end-of-life battery management, do you think can be developed further to assist you?
D. In your estimation, how big do you think LIB recycling would become?
E. How many people do you employ currently?
F. What are your major challenges?

14.9 Annex 9: Sample TOR for Consultancy Services for an Environmental and Social Compliance Audit

1. INTRODUCTION/BACKGROUND

2. ENVIRONMENTAL AND SOCIAL COMPLIANCE AUDIT

Periodic audits of compliance with ESMPs and national law by RCU and PIUs and project contractors are needed to ensure adequate implementation of the mitigation measures for the E&S risks. The exact criteria used for the audit will be based on the content of the ESMPs that will be prepared by RCU and PIU as a result of E&S impact assessment process.

An E&S compliance audit shall be conducted through an independent external agency in accordance with these terms of reference. The audit shall be conducted by a qualified E&S auditor/ inspector/ firm with in-depth technical knowledge of the electricity transmission sector.

The objectives of E&S compliance audit will be to evaluate project activities, especially taking into account E&S regulatory frameworks, World Bank E&S standards, and environmental health and safety measures. Specifically, the objectives of the audit are:

i. To ensure compliance with the Sierra Leone national and local laws/regulations, World Bank E&S requirements, and other requirements (if any) as set out in the ESMF;

ii. To assess progress by Contractors in implementing the ESMP;

iii. Provide expert opinion supported by field observations on the effectiveness of the measures that have been implemented;

iv. Identify mitigation or monitoring measures that don't achieve desired results and need to be modified or replaced;

v. To advise on the financial implications related to implementation of E&S mitigation measures in terms of additional capacity strengthening that may be needed to facilitate necessary improvements;

vi. Recommend changes or additions to the ESMF, if needed;

vii. Recommend measures that will ensure compliance with best practices required for ISO 14001, ISO18001 and ISO 9001 certification; and

viii. Monitor the implementation of the measures/actions above.

Based on the findings of the audit, REA will commit to systematic incorporation of suggested improvement into its E&S risk management model.

3. CONSULTANTS' QUALIFICATIONS

The prospective Consultant should demonstrate the ability to carry out this audit with proven capability of studying and producing consistent high-quality reports and also ensure that all specific tasks in this TOR are adequately addressed in the report, with a minimum of 15 years on the job experience in the field of the assignment. The Consultant will be responsible for the overall process and also ensure that all specific tasks of the ToR are addressed satisfactorily in the report.

The eligible Consultant(s) must have the following qualifications of the personnel within the consulting team:

i. Master's degree in environmental sciences or any relevant science degree (PhD will be an added advantage)

ii. 10 years' experience in carrying out similar assignments with another World Bank financed project

iii. Certified Environmental Auditor

iv. Certified OHS Auditor

v. Experience in Health, Safety and Environmental Auditing of Electric Utility.

vi. Good knowledge of International and Local Environmental, Health and Social legislation for the Power Sector

vii. Certification with reputable international Environmental, Health/Safety and Social institutions e.g. (NEBOSH, IEMA, etc.)

4. DURATION OF WORK AND REPORTING

Duration: This assignment shall be completed within a period of 4 years commencing immediately after contract signing. The Consultant is expected to conduct semi-annual audits over the 4 years, and spend at least three weeks on the project sites each time and in consultations with all relevant stakeholders to gather all necessary primary information.

Reporting: The Consultant shall report to and work in close contact with E&S unit of the RCU and the PIUs and report to the Senior Environmental and Social Specialists of those institutions.

5. DELIVERABLES/PAYMENT PLAN

A comprehensive and fully referenced Report including detailed recommended actions for implementation, must be submitted at the end of the assignment. The Report must contain an

in-depth analysis of the issues described in the objectives and should propose clear, implementable measures towards achieving the set goals of the assignment.

s/n	Activity	Timeline *(After contract signing)*	*Payment (% of Total Remuneration)*
1.	Acceptable Inception Report: - This should include methodology and work plan with clearly defined strategy for carrying out the assignment with timelines for the various outputs. The report should: indicate the objective, scope and criteria of the audit contain an audit plan for the on-site activities contain the audit questionnaires contain Audit Plan and logistics: Audit scope Audit schedule Audit protocols Allocated resources. This should be presented in person by the Consultant at the REA-PMU office. Consultant must submit (3) hard copies and a soft copy of the inception report.	Week 4	10

s/n	Activity	Timeline *(After contract signing)*	*Payment (% of Total Remuneration)*
2.	Institutional Framework Analysis Report: - An update on the current status of the assignment. This should be presented in person by the Consultant at the RCU-PIU office. These reports should contain the Consultant's expert analysis of the following documents and outline the areas of conflict/lapses, while proffering the best options for compliance to achieve the objectives of the assignment: RCU-PIUs internal environmental policies, procedures and guidelines RCU-PIU's quarterly monitoring reports Site layout plans for Subprojects and Transmission Lines Site history, usage and activities Organizational structure DARES ESMF/ESMPs DARES RPF ESMPs for subprojects/transmission line project Review of Operational information: Operational activities and process description Management system policies, procedure and program documentation Relevant records (compliance, monitoring, training etc.) Other relevant information pertaining to environmental and social risk management practices.	Week 10	10

s/n	Activity	Timeline *(After contract signing)*	*Payment (% of Total Remuneration)*
3.	On-site Audit Activities The on-site audit objectives should reflect those of the environmental and social compliance audit, and include: *In-depth document review* Management policy Management system documentation Operational procedures Records (utility, inventory, monitoring, calibration, transportation, training etc.) Previous audit reports. *Conduct on-site meetings:* Present audit scope and objectives Outline the audit approach and methodology Address questions or concerns of site personnel *Conduct detailed site inspections with the aid of on-site audit protocols to look for evidence of:* Legislative and regulatory compliance Internal policy and procedural conformance Establishment of current practice status Identification of improvement opportunities Status of operational practice Staff participation in management system.	As determined by the Audit Plan (at least three weeks during each 6-month audit period)	10

s/n	Activity	Timeline *(After contract signing)*	*Payment (% of Total Remuneration)*
	Conduct staff interview at RCU-PIUs offices to obtain information on Actual E&S practices (current and past) Compliance with/or deviation from statutory and departmental requirements Awareness of requirements and expectations. *Review audit evidence to ensure its adequacy at the conclusion of on-site audits by:* Reviewing information gathered Collecting additional information as needed Substantiating audit findings Summarizing and documenting all findings and observations Identifying issues requiring immediate attention/mitigation Noting outstanding issues require follow-up. *Conduct closing meetings: The closing meetings provide an opportunity at the conclusion of on-site audit to:* Debrief relevant REA management Summarize the audit activities and findings Highlight system strengths and weaknesses Discuss preliminary findings and recommended corrective actions Bring up findings requiring immediate attention; and		

s/n	Activity	Timeline *(After contract signing)*	*Payment (% of Total Remuneration)*
	Clarify any outstanding issues.		
4.	Annual Audit Report: The post audit activities aim to produce an audit report, according to the sample outline presented in section 10.2, with audit findings and recommendations and to contribute towards formulation of a corrective action plan for continual performance improvement. The activities will focus on collating the information and follow-up on outstanding issues, as follows: Completed pre-audit questionnaire, operational document checklists Completed on-site survey questionnaires, on-site audit protocols All relevant correspondence, memoranda, reports, diagrams and drawings Copies of records, photographs, and other information collected during the site visits Detailed inspection and interview notes and summaries. Detailed list of findings and recommendations for improvement.	Every 12 months	10x4
5.	Final Audit Report: Final audit report will be produced at the end of the assignment and include a detailed summary of all findings, recommendations, and improvements achieved over the 4-year assignment.	Year 4	20

6. SCOPE OF THE AUDIT

The audit must be carried out on the ESMPs (where they were prepared, as needed) for the existing facilities and will focus broadly on two elements:

- Compliance of existing facilities and operations with relevant environmental (including ESMS, occupational health and safety) and social laws, regulations, and applicable World Bank E&S requirements and
- The nature and extent of environmental and/or social impacts as a result of past/on-going activities under the project.
- Result of consultation with stakeholders.

The scope and depth of the audit or review should be commensurate with the E&S risks impacts. A corrective action plan will be developed if the E&S compliance audit finds that negative but manageable impacts may occur as a result of continuing implementation of on-going activities or implementation of new proposed investments. The action plan may call for improvements of existing ESMPs, as relevant, to address the impacts that are identified based on the audit.

The action plan should also include measures to inform potentially affected people of the nature of transactions, potential impacts, mitigation measures, and Grievance Mechanisms (GM) as necessary. The action plan should be subsequently incorporated in the investment agreement with Contractors and made a condition of the investment.

The statutory (legal and administrative) frameworks within which the consultancy activities shall be executed are provided in the following regulations, guidelines, and standards (Note: these regulations are not exhaustive):

- The World Bank Safeguard Environmental and Social Standardsand Environmental Health and Safety Guidelines.
- The regulations, guidelines, and standards of the National Environment Agencies.
- The regulations, guidelines, and standards of the Ministry of Environment concerning power generation and transmission activities in the participating countries.
- The regulations, guidelines, and standards of the Ministry of Environment and Social Welfare.
- All International Conventions/Treaties on Environmental Protection/Social Welfare to which countries are a party.

Throughout the duration of the Assignment, the Consultant shall maintain effective communication with relevant Regulatory Agencies/Stakeholders at the National and Local Government levels on the proposed Project. The Stakeholders shall include the following:

- Ministry of Environment,

- Ministry of Land
- Ministry of Youth, Social Welfare
- Ministry of Gender
- Ministries of Environment
- Respective Local Government Councils
- Environmental Agencies
- Community Based Organizations, (Civil Society, NGOs) in the affected Counties.
- Project Affected Persons (PAPs)

The audit shall be divided into three phases: (i) pre-audit activities; (ii) on-site audit activities; and (iii) post-audit activities.

1. Pre-audit activities

The pre-audit activities aim to develop an audit plan for the on-site activities and make the necessary preparation and arrangements for the on-site audit. The tasks at this stage are to:

i. Indicate the objective, scope and criteria of the audit

ii. Develop an audit plan for the on-site activities

iii. Prepare audit questionnaires

iv. Review background information:

a. RCU and PIUs internal environmental policies, procedures and guidelines

b. RCU and PIUs quarterly monitoring reports

c. Site history, usage and activities

d. Organizational structure

e. DARES ESMF

f. DARES ESIAs

g. ESMP for Subprojects

v. Review operational information:

a. Operational activities and process description

b. Management system policies, procedures, and program documentation

c. Relevant records (compliance, monitoring, training etc.)

d. Other relevant information pertaining to environmental and social risk management practices.

vi. In close collaboration with the RCU and PIUs team, conduct initial site visits to a sample of Subprojects as part of determining the scope of the audit:

a. Meet with Officers-in-charge to explain the purpose of the audit

b. Assess whether the background information gathered is up to date and accurate

c. Follow-up on the list of preliminary audit impressions

d. Identify and request additional site information as necessary

e. Confirm adequacy and appropriateness of audit scope

f. Establish adequacy of resources for audit.

vii. Develop on-site questionnaires and audit protocols

viii. Review Audit Plan and arrange logistics:

a. Audit scope

b. Audit schedule

c. Audit protocols

d. Allocated resources.

2. On-site Audit Activities

The on-site audit objectives should reflect those of the environmental and social compliance audit, and include:

a) In-depth document review

- Management policy
- Management system documentation
- Operational procedures
- Records (utility, inventory, monitoring, calibration, transportation, training etc.);
- Previous audit reports.

b) Conduct on-site meetings:

- Present audit scope and objectives

- Outline the audit approach and methodology
- Address questions or concerns of site personnel
- Rally staff support and assistance.

c) Conduct detailed site inspections with the aid of on-site audit protocols to look for evidence of:

- Legislative and regulatory compliance
- Internal policy and procedural conformance
- Establishment of current practice status
- Progress and quality of ESMP
- Identification of improvement opportunities
- Status of operational practice
- Staff participation in the management system.

d) Conduct staff interviews at REA regional offices to obtain information on

- Actual E&S practices (current and past)
- Compliance with/or deviation from statutory and departmental requirements
- Awareness of requirements and expectations.

e) **Review audit evidence to ensure its adequacy at the conclusion of on-site audits by:**

- Reviewing information gathered
- Collecting additional information as needed
- Substantiating audit findings
- Summarizing and documenting all findings and observations
- Identifying issues requiring immediate attention/mitigation
- Nothing outstanding requires follow-up.

f) **Conduct closing meetings: The closing meetings provide an opportunity at the conclusion of the on-site audit to:**

- Debrief relevant RCU and PIUs management
- Summarize the audit activities and findings
- Highlight system strengths and weaknesses
- Discuss preliminary findings and recommended corrective actions
- Bring up findings requiring immediate attention
- Clarify any outstanding issues.

3. Post-audit activities

The post audit activities aim to produce an audit report with audit findings and recommendations and to contribute towards the formulation of a corrective action plan for continual performance improvement. The activities will focus on collating the information and following up on outstanding issues, as follows:

- Completed pre-audit questionnaires, operational document checklists
- Completed on-site Survey questionnaires, on-site audit protocols
- All relevant correspondence, memoranda, reports, diagrams and drawings
- Copies of records, photographs, and other information collected during the site visit
- Detailed inspection and interview notes and summaries.

7. SAMPLE OUTLINE OF THE ANNUAL AUDIT REPORT

An audit report shall include but shall not be limited to the following information:

a) An Executive Summary

b) Introduction and Background of the Audit

c) Audit Scope and Objective

d) Description of Audit Approach and Methodology

e) Summary of Audit Findings

- The past and present impacts of the project
- The responsibility and proficiency of the operators of the project
- Existing internal control mechanisms to identify and mitigate activities with a negative environmental impact
- Existing internal control mechanisms to ensure the workers' health and safety; and
- The existence of environmental and social awareness and sensitization measures, including environmental and social standards, and regulations, law, and policy, for the managerial and operational personnel.

f) Recommendations and Conclusions

14.10 Annex 10: ESMP Table of Contents

ESMP Template

Introduction	Impact Assessment Overview
Baseline Data Acquisition	Determination of Impact Significance
Description of Bio-Physical Environment	Impact Discussions
	Risk and Hazard Assessment
Socio-economic and Health conditions	Summary
Stakeholder Engagement	
Chapter Six: Impact Mitigation Measures	**Chapter Seven: Environmental and Social Management Plan**
Introduction	Introduction
Mitigation Measures Approach	Roles, Responsibilities and Accountabilities for ESMP implementation
Mitigation Measures for the Identified Project Risks and Enhancement Measures for Identified Positive Impacts	Environmental Monitoring Program
	Implementation Schedule and Reporting
	ESMP Costing
Chapter Eight: Grievance Redress Mechanism	Chapter Nine: Public Consultation and Information Disclosure
Chapter Ten: Conclusion	References
	Appendices

14.11 Annex 11: Voluntary Land Donation Guidelines

Voluntary land donation is strictly defined in international practice as the ceding of a property by an owner who is: a) fully informed; and b) can exercise free will, i.e., can refuse to sell or to donate. “Fully informed” means that the owner has complete information regarding the proposed activity and its impacts, its land requirements, and its alternate activity sites, as well as his or her rights to compensation. The owner has also been provided with sufficient time to consider his or her disposition of the property, and the owner has knowingly rejected the right to renege on his or her initial decision. “Free will” means that the owner can reject the possibility of giving up his or her land.

VLD should only be authorized if they (a) have affected people as direct beneficiaries; (b) clearly document Informed Consent; (c) clearly document Power of Choice (option of refusal or to sell ast prevailing market rate); and (d) meet the VLD guidelines of the project. The guidelines have been put into place to ensure that donations are indeed voluntary, that the donor is the legitimate owner of such lands, and that the donor is fully informed of the purpose of the donation and of the implications of donating the property.[13] If the land is donated on a conditional basis, the terms and conditions for the temporary use of the property must be clearly documented.

[13] Voluntary land donation is strictly defined in international practice as the ceding of a property by an owner who is: a) fully informed; and b) can exercise free will, i.e., can refuse to sell or to donate. “Fully informed” means that the owner has complete information regarding the proposed activity

The following principles should be complied with when VLD is carried out:

Core principles:

- The land required to meet technical project criteria must be identified by the affected community through a participatory approach and not by the developer, line agencies or project authorities (nonetheless, technical authorities can help ensure that the land is appropriate for project purposes and that the project will produce no health or environmental safety hazards); mini-grids can be sited in any location within a community so long the location meets the technical criteria for the investment

- The proportion of land that may be donated cannot exceed 15 m2 per kW of the proposed generation capacity plus an additional 7.5m2 per kW for future generation capacity expansion.

- Land donation for a single mini-grid or power generation system shall not exceed 10% of the land donor's holdings in cases where land ownership is individual or family.

- Land required above 1,500 m2, whether for initial construction or future generation capacity expansion, can be either leased using a leasehold agreement (using ground rent scale set in Sierra Leone) or bought on wiling-buyer-willing-seller basis at the current local market price in the community.

- Donated land can only be used for power plant construction and future expansion and be fenced off accordingly.

- Shall the donated land not be used for power plant construction within three years, the unused land shall be returned to the donor.

Additional requirements:

- Impacts of proposed activities on donated land must be fully explained to the donor.

  - The potential donor is aware that refusal is an option, and that right of refusal is specified in the donation document the donor will sign.

and its impacts, its land requirements, and its alternate activity sites, as well as his or her rights to compensation. The owner has also been provided with sufficient time to consider his or her disposition of the property, and the owner has knowingly rejected the right to renege on his or her initial decision. "Free will" means that the owner can reject the possibility of giving up his or her land.

- The act of donation is undertaken without coercion, manipulation, or any form of pressure on the part of the developer, the public or traditional authorities.
- The donor may request monetary or non-monetary benefits or incentives as a condition for donation.
- Donation of land cannot occur if it requires any household relocation.
- For community or collective land, donation can only occur with the consent of individuals using or occupying the land.
- Verification must be obtained from each person/ family donating land (either through proper documentation or through confirmation by at least two witnesses)
- The implementing agency or mini grid developers establish that the land to be donated is free of encumbrance or encroachment and registers the donated land in an official land registry.
- Any portion of donated land that is not used for its agreed purpose is returned to the donor.
- The land in question must be free of squatters, encroachers, or other claims or encumbrances.
- Land thus donated is free from any dispute on ownership, squatters, encroachers, or other claims or any other encumbrances.

Procedure:

Step 1: Determining and Documenting the Appropriateness of VLD for the Subproject

In considering the relevance of VLD for the specific subproject, mini-grid developer will document:

- How much land does the subproject require on both a permanent and temporary basis?
- What the land would be used for
- What alternatives to donation exist (e.g., right of use, right of way, lease, or purchase)
- The proposed terms of any donation of land
- Any other details that are relevant to why the donation of land may be appropriate.

Step 2: Official Notification to Landowners regarding the Option for VLD

If it is determined that VLD could be relevant for a subproject, the local authority (e.g., village head) will provide landowners with official written notification of the proposed construction of electricity infrastructure within their area and the associated opportunity for voluntary donation of land.

Step 3: Briefing to Interested Landowners of the Process of VLD

If the landowner indicates to the village head or similar authority that he or she is interested in VLD, they should brief the landowner/village about the process of VLD and explain the VLD form that would be required to be completed and signed by the landowner/villager and his/her spouse, as relevant. Prior to briefing the interested landowner, the village head should confirm that:

- The interested landholder/villager would not lose more than 10% of his/her total productive assets.
- No physical relocation of the interested landowner/villager and/or his/her family would be necessary.

Step 4: Due Diligence Verification Process to Confirm Land Ownership and Use

If the interested landowner and his/her spouse confirm that they would like to proceed with VLD, the next step is to verify the ownership and use of the land proposed to be donated. The verification process should review available information and documentation regarding: Mini grid developer should:

- The owner or owners of the land
- The users of the land, or any parties that occupy the land (either physically or through ownership of an asset or conduct of livelihood or business activities on the land)
- Any competing claims of ownership or use.
- Structures and assets on the land
- Trees or crops on the land.
- Any encumbrance on the land.

It is important to: (i) identify the right that is being transferred (an ownership right, a use right, a right of way, etc.); and (ii) check whether the donor actually has the right s/he claims to have. In many circumstances where careful due diligence has not been carried out, significant conflict has arisen at a later stage when another party claims that they have the same or a competing right. In some circumstances – but not all – the transferee

will have documentary evidence of such right. Where no such evidence exists, the due diligence can establish rights by speaking with local community officials and neighbors.

Step 5: Public Consultations and Disclosure

The decision to voluntarily donate land must be taken on the basis of a full understanding of the specific subproject and the consequences of agreeing to donate land. Accordingly, the parties that will be affected by the donation (the owners and users of the land, and the neighbors to the land as appropriate) must be provided with accurate and accessible information regarding what the land will be used for, for how long, and the impact the donation may have on them and their families. Prior written notification indicating the location and amount of land that is sought must be provided, and its intended use must be disclosed.

Where the intention is to deprive the parties affected by the donation of the land permanently, or for a significant length of time, this must be made clear. It should be noted that in many communities, the concept of alienation of land is uncommon and difficult to understand, and care needs to be taken to ensure that the implications of this are fully understood. It is also important to decide who else, within direct and extended families, should be consulted about the proposed donation of land in advance of it taking place; for example, older children.

Further to this, there should be a clear agreement as to which party/ies will pay the costs associated with the donated land. This could include measurement costs, documentation and notarial fees, transfer taxes, and registration fees. It should also include the costs of re-measuring/re-titling the transferee's remaining land and any new documentation relating to it.

Step 6: Establishing Informed Consent

Mini grid developers, in coordination with the village administration, would verify the informed consent or power of choice by landholders who had selected to donate land. In particular, the following would be verified and documented in the voluntary land donation form:

- That the donor has a right to refuse to donate of an option to sell at prevailing market rate
- What the land is going to be used for, by whom and for how long
- That the landowner donating the land would be deprived of the ownership or right to use the land, and what this really means.
- That the landowner has a right to refuse to donate the land
- Whether there are alternatives to using the land
- The process that would need to be followed to donate the land (e.g., execute documents, get spousal consents, pay taxes)

- The effect of the donation on the land donor's family, and what they can do if they (or their family or heirs) decide they want the land back.

The right to refuse must be a legitimate right, unconditional, and the potential transferee must be capable of exercising it in the local community and political context. For this reason, it is important to be sure that the decision to donate is undertaken without coercion, manipulation, or any form of pressure on the part of public or traditional authorities. For collective or communal land, donation must be based upon the informed consent of all individuals using or occupying the land.

Step 7: Preparation of Clear and Appropriate Documentation

While it is important to have evidence of an intention and agreement to donate land, it is equally important to ensure, where required and appropriate, that the land is legally transferred. While the process relating to the legal transfer of the land is frequently complicated and time-consuming, it must be addressed. *[In specific circumstances, for example where the land is being transferred to the community, it may not be necessary to legally transfer the land. However, experience indicates that lack of formal transfer can create significant uncertainty in the future, which impacts on the sustainability of the infrastructure and services and can have a negative effect on community relations.]*

Mini grid developer should:

- Identify the appropriate documentation, including the agreement to make the land transfer and any legal documentation that may be required.
- Ensure that the agreement: - Refers to the consultation has taken place; - Sets out the terms of the transfer; - Confirms that the decision to transfer was freely made, and was not subject to coercion, manipulation, or any form of pressure; - Attaches an accurate map of the land being transferred (boundaries, coordinates); - Sets out who will bear the costs of the transfer (e.g., notarial fees, taxes, title issues) and documents the residual land rights
- Ensure that all necessary parties sign the documents, including obtaining consent from spouses and children of legal age.
- Ensure that the transfer and title is registered or recorded; and
- Ensure that the land remaining after the donated land is excised is properly titled, registered, or recorded.

It is also important to maintain a record of the process that has been followed. Such documents could include the following:

- The notification indicating the location and amount of land that was sought from and its intended use for the project, with a record of when and where this was made public.
- Records of the consultations that were held and what was discussed.
- A copy of the due diligence that was conducted.
- Copies of each of the formal statements of donation, establishing informed consent as described above, and signed by each owner or user involved.

- Copies of all documents, registrations or records showing the legal transfer of the land.
- A map showing each parcel of land.
- Appropriate documentation for reverting the land to the donor upon decommissioning from the site.

Step 8: Grievance redress arrangements

The project specifies the means by which donors (and, potentially, persons whose use or occupancy was not recognized in the transfer of land) may raise grievances, and measures to ensure consideration of, and timely response to, grievances raised. The grievance process includes participation of reviewers not directly affiliated with the village administration. The grievance process imposes no cost upon those raising grievances, and participation in the grievance process does not preclude pursuit of legal remedies under the laws of the country.

VOLUNTARY LAND DONATION (OR LAND LEASE) FORM

This form or an equivalent document is to be used to record the consent of landowners who offer private land for a good community activity. The essentials of voluntary donation are that the donors have been freely consulted prior to the donation, were not pressured or coerced, that the donation will not affect a significant proportion (more than 10%) of their productive assets, and that they have the right to refuse and to lodge a complaint if they have a grievance about the process.

Consent Form for Voluntary Donation
I/We: _____ male household head _____female household head, and/or person(s) exercising customary rights over land described as (legal description, GPS coordinates if available) in

Village_____

Island_____

Province _____

Hereby declare that I/we/the group are the owners/users of the land required for (description): _____

I/we are voluntarily donating the use of land and or/ land-based assets (land area, type of assets /trees/crops, etc.) _____

_____

for the purpose of: (specify activity) _____

_____

We agree to this purpose from (date)_____ for as long as the purpose is served *or* until (specify end date, typically the life expectancy of the facility) _____

I/we make this donation of My/Our own free will. I/We are waiving My/Our right to compensation of any kind for the specified duration of the activity.

I/We affirm that we have been fully and freely consulted and informed about the activity prior to agreement, have not been subject to any form of coercion, understand that I/we have the right to refuse, and to seek redress for any grievance concerning this transaction.

Signed:
Male household head _____ /Female household head_____

Chief or Local Custom Authority_____

14.12 Annex 12: Code of Conduct

Codes of Conduct and Action Plan For Implementing ESHS and OHS Standards, and Preventing Gender Based Violence and Violence Against Children

Background

The purpose of these *Codes of Conduct and Action Plan for Implementing ESHS and OHS Standards, and Preventing Gender Based Violence (GBV) and Violence Against Children (VAC)* is to introduce a set of key definitions, core Codes of Conduct, and guidelines that:

i. clearly define obligations on all project staff (including sub-contractors and day workers) with regard to implementing the project's environmental, social, health and safety (ESHS) and occupational health and safety (OHS) requirements, and;

ii. help prevent, report and address GBV and VAC within the work site and in its immediate surrounding communities.

The application of these Codes of Conduct will help ensure the project meets its ESHS and OHS objectives, as well as preventing and/or mitigating the risks of GBV and VAC on the project and in the local communities.

These Codes of Conduct are to be adopted by those working on the project and are meant to:

i. create awareness of the ESHS and OHS expectations on the project;

ii. create common awareness about GBV and VAC and:

(a) ensure a shared understanding that they have no place in the project; and,
(b) create a clear system for identifying, responding to, and sanctioning GBV and VAC incidents.

Ensuring that all project staff understand the values of the project, understand expectations for all employees, and acknowledge the consequences for violations of these values, will help to create smoother, more respectful and productive project implementation thereby helping ensure that the project's objectives will be achieved.

Definitions

The following definitions apply:

Environmental, Social, Health and Safety (ESHS): an umbrella term covering issues related to the impact of the project on the environment, communities and workers.

Occupational Health and Safety (OHS): Occupational health and safety is concerned with protecting the safety, health and welfare of people engaged in work or employment. The enjoyment of these standards at the highest levels is a basic human right that should be accessible by each worker.

Gender-Based Violence (GBV): is an umbrella term for any harmful act that is perpetrated against a person's will and **that is based on socially ascribed (i.e. gender) differences between males and females**. It includes acts that inflict physical, sexual or mental harm or suffering, threats of such acts, coercion, and other deprivations of liberty. These acts can occur in public or in private. The term GBV is used to underscore systemic inequality between males and females (which exists in every society in the world) and acts as a unifying and foundational characteristic of most forms of violence perpetrated against women and girls. The 1993 United Nations Declaration on the Elimination of Violence against Women defines violence against women as "any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women."[14] The six core types of GBV are:

- **Rape**: non-consensual penetration (however slight) of the vagina, anus or mouth with a penis, other body part, or an object.

- **Sexual Assault**: any form of non-consensual sexual contact that does not result in or include penetration. Examples include attempted rape, as well as unwanted kissing, fondling, or touching of genitalia and buttocks.

[14] It is important to note that women and girls disproportionately experience violence; overall 35 percent of women worldwide have faced physical or sexual violence (WHO, Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence, 2013). Some men and boys also face violence based on their gender and unequal power relationships.

- ***Sexual Harassment:*** is unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature. Sexual harassment is not always explicit or obvious; it can include implicit and subtle acts but always invoLVes a power and gender dynamic in which a person in power uses their position to harass another based on their gender. Sexual conduct is unwelcome whenever the person subjected to it considers it unwelcome (e.g. looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; in some instances, giving personal gifts).

- ***Sexual Favors***: is a form of sexual harassment and includes making promises of favorable treatment (e.g. promotion) or threats of unfavorable treatment (e.g. loss of job) dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior.

- **Physical Assault**: an act of physical violence that is not sexual in nature. Examples include hitting, slapping, choking, cutting, shoving, burning, shooting or use of any weapons, acid attacks or any other act that re*sults* in pain, discomfort or injury.

- **Forced Marriage**: the marriage of an individual against her or his will.

- **Denial of Resources, Opportunities or Services:** denial of rightful access to economic resources/assets or livelihood opportunities, education, health or other social services (e.g. a widow prevented from receiving an inheritance, earnings forcibly taken by an intimate partner or family member, a woman prevented from using contraceptives, a girl prevented from attending school, etc.).

- **Psychological / Emotional Abuse:** infliction of mental or emotional pain or injury. Examples include threats of physical or sexual violence, intimidation, humiliation, forced isolation, stalking, harassment, unwanted attention, remarks, gestures or written words of a sexual and/or menacing nature, destruction of cherished things, etc.

  Violence Against Children (VAC): is defined as physical, sexual, emotional and/or psychological harm, neglect or negligent treatment of minor children (i.e. under the age

of 18), including exposure to such harm,[15] that results in actual or potential harm to the child's health, survivor, development or dignity in the context of a relationship of responsibility, trust or power. This includes using children for profit, labor[16], sexual gratification, or some other personal or financial advantage. This also includes other activities such as using computers, mobile phones, video and digital cameras or any other medium to exploit or harass children or to access child pornography.

Grooming: are behaviors that make it easier for a perpetrator to procure a child for sexual activity. For example, an offender might build a relationship of trust with the child and then seek to sexualize that relationship (for example by encouraging romantic feelings or exposing the child to sexual concepts through pornography).

Online Grooming: is the act of sending an electronic message with indecent content to a recipient who the sender believes to be a minor, with the intention of procuring the recipient to engage in or submit to sexual activity with another person, including but not necessarily the sender.[17]

Accountability Measures: are the measures put in place to ensure the confidentiality of survivors and to hold contractors, consultants and the client responsible for instituting a fair system of addressing cases of GBV and VAC.

Contractors Environmental and Social Management Plan (CESMP): the plan prepared by the contractor outlining how they will implement the works activities in accordance with the project's environmental and social management plan (ESMP).

Child: is used interchangeably with the term 'minor' and refers to a person under the age of 18. This is in accordance with Article 1 of the United Nations Convention on the Rights of the Child.

Child Protection (CP): is an activity or initiative designed to protect children from any form of harm, particularly arising from VAC.

Consent: is the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such

[15] Exposure to GBV is also considered VAC.

[16] The employment of children must comply with all relevant local legislation, including labor laws in relation to child labor and World Bank's safeguard policies on child labor and minimum age. They must also be able to meet the project's Occupational Health and Safety competency standards.

[17] For example, the Vanuatu Criminal Code Act 1995, Division 474 (telecommunications offences, subdivision C).

acceptance or agreement is obtained using threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age.[18] Mistaken belief regarding the age of the child and consent from the child is not a defense.

Consultant: is as any firm, company, organization or other institution that has been awarded a contract to provide consulting services to the project and has hired managers and/or employees to conduct this work.

Contractor: is any firm, company, organization or other institution that has been awarded a contract to conduct infrastructure development works for the project and has hired managers and/or employees to conduct this work. This also includes sub-contractors hired to undertake activities on behalf of the contractor.

Employee: is any individual offering labor to the contractor or consultant within country on or off the work site, under a formal or informal employment contract or arrangement, typically, but not necessarily (e.g. including unpaid interns and volunteers), in exchange for a salary, with no responsibility to manage or supervise other employees.

GBV and VAC Allegation Procedure: is the prescribed procedure to be followed when reporting incidents of GBV or VAC.

GBV and VAC Codes of Conduct: The Codes of Conduct adopted for the project covering the commitment of the company, and the responsibilities of managers and individuals with regards to GBV and VAC.

GBV and VAC Compliance Team (GCCT): a team established by the project to address GBV and VAC issues.

Grievance Mechanism (GM): is the process established by a project to receive and address complaints.

Manager: is any individual offering labor to the contractor or consultant, on or off the work site, under a formal or informal employment contract and in exchange for a salary, with responsibility to control or direct the activities of a contractor's or consultant's team,

[18] For example, under Article 97 Criminal consolidation act for age of legal consent in Vanuatu, sexual activity with any child under the age of 15 years for heterosexual conduct and 18 years for same sex conduct is prohibited (http://tinyurl.com/vu-consent). However, the World Bank follows the United Nations for the age of consent (18 years) so this applies on World Bank financed projects.

unit, division or similar, and to supervise and manage a pre-defined number of employees.

Perpetrator: the person(s) who commit(s) or threaten(s) to commit an act or acts of GBV or VAC.

Response Protocol: is the mechanisms set in place to respond to cases of GBV and VAC (see Section 4.7 Response Protocol).

Survivor/Survivors: the person(s) adversely affected by GBV or VAC. Women, men and children can be survivors of GBV; children can be survivors of VAC.

Work Site: is the area in which infrastructure development works are being conducted, as part of the project. Consulting assignments are considered to have the areas in which they are active as their work sites.

Work Site Surroundings: is the 'Project Area of Influence' which are any area, urban or rural, directly affected by the project, including all human settlements found on it.

Codes of Conduct

This chapter presents three Codes of Conduct for use:

i. **Company Code of Conduct:** Commits the company to addressing GBV and VAC issues;
ii. **Manager's Code of Conduct:** Commits managers to implementing the Company Code of Conduct, as well as those signed by individuals; and,
iii. **Individual Code of Conduct:** Code of Conduct for everyone working on the project, including managers.

Company Code of Conduct

Implementing ESHS and OHS Standards

Preventing Gender Based Violence and Violence Against Children

The company is committed to ensuring that the project is implemented in such a way which minimizes any negative impacts on the local environment, communities, and its workers. This will be done by respecting the environmental, social, health and safety (ESHS) standards, and ensuring appropriate occupational health and safety (OHS) standards are met. The company is also committed to creating and maintaining an environment in which gender-based violence (GBV) and violence against children (VAC)

have no place, and where they will not be tolerated by any employee, sub-contractors, supplier, associate, or representative of the company.

Therefore, to ensure that all those engaged in the project are aware of this commitment, the company commits to the following core principles and minimum standards of behavior that will apply to all company employees, associates, and representatives, including sub-contractors and suppliers, without exception:

General

1. The company—and therefore all employees, associates, representatives, sub-contractors and suppliers—commits to complying with all relevant national laws, rules and regulations.
2. The company commits to fully implementing its 'Contractors Environmental and Social Management Plan' (CESMP).
3. The company commits to treating women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status. Acts of GBV and VAC are in violation of this commitment.
4. The company shall ensure that interactions with local community members are done with respect and non-discrimination.
5. Demeaning, threatening, harassing, abusive, culturally inappropriate, or sexually provocative language and behavior are prohibited among all company employees, associates, and its representatives, including sub-contractors and suppliers.
6. The company will follow all reasonable work instructions (including regarding environmental and social norms).
7. The company will protect and ensure proper use of property (for example, to prohibit theft, carelessness or waste).

Health and Safety

8. The company will ensure that the project's occupational health and safety (OHS) Management Plan is effectively implemented by company staff, as well as sub-contractors and suppliers.
9. The company will ensure that all persons on-site wear prescribed and appropriate personal protective equipment, preventing avoidable accidents and reporting conditions or practices that pose a safety hazard or threaten the environment.
10. The company will:

    i. prohibit the use of alcohol during work activities.

    ii. prohibit the use of narcotics or other substances which can always impair faculties.

11. The company will ensure that adequate sanitation facilities are available on site and at any worker accommodations provided to those working on the project.

Gender Based Violence and Violence Against Children

12. Acts of GBV or VAC constitute gross misconduct and are therefore grounds for sanctions, which may include penalties and/or termination of employment, and if appropriate referral to the Police for further action.

13. All forms of GBV and VAC, including grooming are unacceptable, regardless of whether they take place on the work site, the work site surroundings, at worker's camps or within the local community.

i. Sexual Harassment—for instance, making unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct, of a sexual nature, including subtle acts of such behavior, is prohibited.

ii. Sexual favors —for instance, making promises or favorable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior are prohibited.

14. Sexual contact or activity with children under 18—including through digital media—is 7prohibited. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.

15. Unless there is full consent[19] by all parties involved in the sexual act, sexual interactions between the company's employees (at any level) and members of the communities surrounding the workplace are prohibited. This includes relationships involving the withholding/promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered "non-consensual" within the scope of this Code.

16. In addition to company sanctions, legal prosecution of those who commit acts of GBV or VAC will be pursued if appropriate.

17. All employees, including volunteers and sub-contractors are highly encouraged to report suspected or actual acts of GBV and/or VAC by a fellow worker, whether in the same company or not. Reports must be made in accordance with project's GBV and VAC Allegation Procedures.

[19] **Consent** is defined as the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained using threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

18. Managers are required to report and act to address suspected or actual acts of GBV and/or VAC as they have a responsibility to uphold company commitments and hold their direct reports responsible.

Implementation

To ensure that the above principles are implemented effectively, the company commits to ensuring that:

19. All managers sign the project's 'Manager's Code of Conduct' detailing their responsibilities for implementing the company's commitments and enforcing the responsibilities in the 'Individual Code of Conduct'.
20. All employees sign the project's 'Individual Code of Conduct' confirming their agreement to comply with ESHS and OHS standards, and not to engage in activities resulting in GBV or VAC.
21. Displaying the Company and Individual Codes of Conduct prominently and in clear view at workers' camps, offices, and in public areas of the workspace. Examples of areas include waiting, rest, and lobby areas of sites, canteen areas, and health clinics.
22. Ensure that posted and distributed copies of the Company and Individual Codes of Conduct are translated into the appropriate language of use in the work site areas, as well as for any international staff in their native language.
23. An appropriate person is nominated as the company's 'Focal Point' for addressing GBV and VAC issues, including representing the company on the GBV and VAC Compliance Team (GCCT), which is comprised of representatives from the client, contractor(s), the supervision consultant, and local service provider(s).
24. Ensuring that an effective GBV and VAC Action Plan is developed in consultation with the GCCT which includes as a minimum:
    i. **GBV and VAC Allegation Procedure** to report GBV and VAC issues through the project Grievance Redress Mechanism (Section 4.3 Action Plan);
    ii. **Accountability Measures** to protect confidentiality of all involved (Section 4.4 Action Plan); and,
    iii. **Response Protocol** applicable to GBV and VAC survivors and perpetrators (Section 4.7 Action Plan).
25. That the company effectively implements the agreed final GBV and VAC Action Plan, providing feedback to the GCCT for improvements and updates as appropriate.
26. All employees attend an induction training course prior to commencing work on site to ensure they are familiar with the company's commitments to ESHS and OHS standards, and the project's GBV and VAC Codes of Conduct.
27. All employees attend a mandatory training course once a month for the duration of the contract starting from the first induction training prior to commencement of

work to reinforce the understanding of the project's ESHS and OHS standards and the GBV and VAC Code of Conduct.

I do hereby acknowledge that I have read the foregoing Company Code of Conduct, and on behalf of the company agree to comply with the standards contained therein. I understand my role and responsibilities to support the project's OHS and ESHS standards, and to prevent and respond to GBV and VAC. I understand that any action inconsistent with this Company Code of Conduct or failure to act mandated by this Company Code of Conduct may result in disciplinary action.

Company name: _____

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Manager Code of Conduct

Implementing ESHS and OHS Standards

Preventing Gender Based Violence and Violence Against Children

Managers at all levels have a responsibility to uphold the company's commitment to implementing the ESHS and OHS standards, and preventing and addressing GBV and VAC. This means that managers have an acute responsibility to create and maintain an environment that respects these standards and prevents GBV and VAC. Managers need to support and promote the implementation of the Company Code of Conduct. To that end, managers must adhere to this Manager's Code of Conduct and sign the Individual Code of Conduct. This commits them to supporting the implementation of the CESMP and the OHS Management Plan and developing systems that facilitate the implementation of the GBV and VAC Action Plan. They need to maintain a safe workplace, as well as a GBV-free and VAC-free environment at the workplace and in the local community. These responsibilities include but are not limited to:

Implementation

1.To ensure maximum effectiveness of the Company and Individual Codes of Conduct:

i.Prominently displaying the Company and Individual Codes of Conduct in clear view at workers' camps, offices, and in public areas of the workspace. Examples of areas include waiting, rest and lobby areas of sites, canteen areas and health clinics.

ii. Ensuring all posted and distributed copies of the Company and Individual Codes of Conduct are translated into the appropriate language of use in the work site areas as well as for any international staff in their native language.

1. Verbally and in writing explain the Company and Individual Codes of Conduct to all staff.
2. Ensure that:
   i. All direct reports sign the 'Individual Code of Conduct', including acknowledgment that they have read and agree with the Code of Conduct.
   ii. Staff listed and signed copies of the Individual Code of Conduct are provided to the OHS Manager, the GCCT, and the client.
   iii. Participate in training and ensure that staff also participate as outlined below.
   iv. Put in place a mechanism for staff to:
      (a) report concerns on ESHS or OHS compliance; and,
      (b) confidentially report GBV or VAC incidents through the Grievance Mechanism (GM)
   v. Staff are encouraged to report suspected or actual ESHS, OHS, GBV or VAC issues, emphasizing the staff's responsibility to the Company and the country hosting their employment, and emphasizing the respect for confidentiality.
3. In compliance with applicable laws and to the best of your abilities, prevent perpetrators of sexual exploitation and abuse from being hired, re-hired or deployed. Use background and criminal reference checks for all employees.

4. Ensure that when engaging in partnership, sub-contractor, supplier or similar agreements, these agreements:
   i. Incorporate the ESHS, OHS, GBV and VAC Codes of Conduct as an attachment.
   ii. Include the appropriate language requiring such contracting entities and individuals, and their employees and volunteers, to comply with the Individual Codes of Conduct.
   iii. Expressly state that the failure of those entities or individuals, as appropriate, to ensure compliance with the ESHS and OHS standards, take preventive measures against GBV and VAC, to investigate allegations thereof, or to take corrective actions when GBV or VAC has occurred, shall not only constitute grounds for sanctions and penalties in accordance with the Individual Codes of Conduct but also termination of agreements to work on or supply the project.

5. Provide support and resources to the GCCT to create and disseminate internal sensitization initiatives through the awareness-raising strategy under the GBV and VAC Action Plan.
6. Ensure that any GBV or VAC issue warranting Police action is reported to the Police, the client and the World Bank immediately.

7. Report and act according to the response protocol (Section 4.7 Response Protocol) any suspected or actual acts of GBV and/or VAC as managers have a responsibility to uphold company commitments and hold their direct reports responsible.

8. Ensure that any major ESHS or OHS incidents are reported to the client and the supervision engineer immediately.

Training

9. The managers are responsible to:

i. Ensure that the OHS Management Plan is implemented, with suitable training required for all staff, including sub-contractors and suppliers; and,

ii. Ensure that staff have a suitable understanding of the CESMP and are trained as appropriate to implement the CESMP requirements.

10. All managers are required to attend an induction manager training course prior to commencing work on site to ensure that they are familiar with their roles and responsibilities in upholding the GBV and VAC elements of these Codes of Conduct. This training will be separate from the induction training course required of all employees and will provide managers with the necessary understanding and technical support needed to begin to develop the GBV and VAC Action Plan for addressing GBV and VAC issues.

11. Managers are required to attend and assist with the project facilitated monthly training courses for all employees. Managers will be required to introduce the trainings and announce the self-evaluations, including collecting satisfaction surveys to evaluate training experiences and provide advice on improving the effectiveness of training.

12. Ensure that time is provided during work hours and that staff prior to commencing work on site attend the mandatory project facilitated induction training on:

i. OHS and ESHS; and,

ii. GBV and VAC required of all employees.

13. During civil works, ensure that staff attend ongoing OHS and ESHS training, as well as the monthly mandatory refresher training course required of all employees to combat increased risk of GBV and VAC.

Response

14. Managers will be required to take appropriate actions to address any ESHS or OHS incidents.

15. With regard to GBV and VAC:

xiii. Provide input to the GBV and VAC Allegation Procedures (Section 4.2 Action Plan) and Response Protocol (Section 4.7 Action Plan) developed by the GCCT as part of the final cleared GBV and VAC Action Plan.

xiv. Once adopted by the Company, managers will uphold the Accountability Measures (Section 4.4 Action Plan) set forth in the GBV and VAC Action Plan to maintain the confidentiality of all employees who report or (allegedly) perpetrate incidences of GBV and VAC (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law).

xv. If a manager develops concerns or suspicions regarding any form of GBV or VAC by one of his/her direct reports, or by an employee working for another contractor on the same work site, s/he is required to report the case using the GM.
xvi. Once a sanction has been determined, the relevant manager(s) is/are expected to be personally responsible for ensuring that the measure is effectively enforced, within a maximum timeframe of 14 days from the date on which the decision to sanction was made
xvii. If a Manager has a conflict of interest due to personal or familial relationships with the survivor and/or perpetrator, he/she must notify the respective company and the GCCT. The Company will be required to appoint another manager without a conflict of interest to respond to complaints.
xviii. Ensure that any GBV or VAC issue warranting Police action is reported to the Police, the client and the World Bank immediately

16. Managers failing to address ESHS or OHS incidents, or failing to report or comply with the GBV and VAC provisions, may be subject to disciplinary measures, to be determined and enacted by the company's Chief Executive Officer (CEO), Managing Director or equivalent highest-ranking manager. Those measures may include:

i. Informal warning.
ii. Formal warning.
iii. Additional Training.
iv. Loss of up to one week's salary.
v. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
vi. Termination of employment.

17. Ultimately, failure to effectively respond to ESHS, OHS, GBV and VAC cases on the work site by the company's managers or CEO may provide grounds for legal actions by authorities.

I do hereby acknowledge that I have read the foregoing Manager's Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, GBV and VAC requirements. I understand that any action inconsistent with this Manager's Code of Conduct or failure to act mandated by this Manager's Code of Conduct may result in disciplinary action.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Individual Code of Conduct

Implementing ESHS and OHS Standards

Preventing Gender Based Violence and Violence Against Children

I, _____, acknowledge that adhering to environmental, social health and safety (ESHS) standards, following the project's occupational health and safety (OHS) requirements, and preventing gender-based violence (GBV) and violence against children (VAC) is important.

The company considers that failure to follow ESHS and OHS standards, or to partake in GBV or VAC activities—be it on the work site, the work site surroundings, at workers' camps, or the surrounding communities—constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. Prosecution by the Police of those who commit GBV or VAC may be pursued if appropriate.

I agree that while working on the project I will:

1. Attend and actively partake in training courses related to ESHS, OHS, HIV/AIDS, GBV and VAC as requested by my employer.
2. Will always wear my personal protective equipment (PPE) when at the work site or engaged in project related activities.
3. Take all practical steps to implement the contractor's environmental and social management plan (CESMP).
4. Implement the OHS Management Plan.
5. Adhere to a zero-alcohol policy during work activities, and refrain from the use of narcotics or other substances which can always impair faculties.
6. Consent to Police background check.
7. Treat women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
8. Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
9. Not engage in sexual harassment—for instance, making unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct, of a sexual nature, including subtle acts of such behavior (e.g. looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; giving personal gifts; making comments about somebody's sex life; etc.).
10. Not engage in sexual favors—for instance, making promises or favorable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior.

11. Not participate in sexual contact or activity with children—including grooming or contact through digital media. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.
12. Unless there is the full consent[20] by all parties invoLVed, I will not have sexual interactions with members of the surrounding communities. This includes relationships invoLVing the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered "non-consensual" within the scope of this Code.
13. Consider reporting through the GM or to my manager any suspected or actual GBV or VAC by a fellow worker, whether employed by my company or not, or any breaches of this Code of Conduct.

With regard to children under the age of 18:

14. Wherever possible, ensure that another adult is present when working in the proximity of children.
15. Not invite unaccompanied children unrelated to my family into my home, unless they are at immediate risk of injury or in physical danger.
16. Not use any computers, mobile phones, video and digital cameras or any other medium to exploit or harass children or to access child pornography (see also "Use of children's images for work related purposes" below).
17. Refrain from physical punishment or discipline of children.
18. Refrain from hiring children for domestic or other labor below the minimum age of 14 unless national law specifies a higher age, or which places them at significant risk of injury.
19. Comply with all relevant local legislation, including labor laws in relation to child labor and World Bank's safeguard policies on child labor and minimum age.
20. Take appropriate caution when photographing or filming children.

Use of children's images for work related purposes

When photographing or filming a child for work related purposes, I must:

[20] **Consent** is defined as the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained using threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

21. Before photographing or filming a child, assess and endeavor to comply with local traditions or restrictions for reproducing personal images.
22. Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.
23. Ensure photographs, films, videos and digital video disks (DVDs) present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive.
24. Ensure images are honest representations of the context and the facts.
25. Ensure file labels do not reveal identifying information about a child when sending images electronically.

Sanctions

I understand that if I breach this Individual Code of Conduct, my employer will take disciplinary action which could include:

1. Informal warning.
2. Formal warning.
3. Additional Training.
4. Loss of up to one week's salary.
5. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
6. Termination of employment.
7. Report to the Police if warranted.

I understand that it is my responsibility to ensure that the environmental, social, health and safety standards are met. That I will adhere to the occupational health and safety management plan. That I will avoid actions or behaviors that could be construed as GBV or VAC. Any such actions will be a breach this Individual Code of Conduct. I do hereby acknowledge that I have read the foregoing Individual Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, GBV and VAC issues. I understand that any action inconsistent with this Individual Code of Conduct or failure to act mandated by this Individual Code of Conduct may result in disciplinary action and may affect my ongoing employment.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

14.13 Annex 13: GBV and VAC Action Plan

4.1 The GBV and VAC Compliance Team

The project shall establish a 'GBV and VAC Compliance Team' (GCCT). The GCCT will include, as appropriate to the project, at least four representatives ('Focal Points') as follows:

i. A safeguards specialist from the client;
ii. The occupational health and safety manager from the contractor[21], or someone else tasked with the responsibility for addressing GBV and VAC with the time and seniority to devote to the position;
iii. The supervision consultant; and,
iv. A representative from a local service provider with experience in GBV and VAC (the 'Service Provider').

It will be the duty of the GCCT with support from the management of the contractor to inform workers about the activities and responsibilities of the GCCT. To effectively serve on the GCCT, members must undergo training by the local service provider prior to the commencement of their assignment to ensure that they are sensitized on GBV and Child Protection.

The GCCT will be required to:

i. Approve any changes to the **GBV and VAC Codes of Conduct** contained in this document, with clearances from the World Bank for any such changes.
ii. Prepare the **GBV and VAC Action Plan** reflecting the Codes of Conduct, which includes:
    (a) **GBV and VAC Allegation Procedures** (See 4.2)
    (b) **Accountability Measures** (See 4.4)
    (c) An **Awareness-raising Strategy** (See 4.6)
    (d) A **Response Protocol** (See 4.7)
iii. Obtain approval of the GBV and VAC Action Plan by the contractor's management;
iv. Obtain client and World Bank clearances for the GBV and VAC Action Plan before full mobilization;
v. Receive and monitor resolutions and sanctions regarding complaints received related to GBV and VAC associated with the project; and,
vi. Ensure that GBV and VAC statistics in the GM are up to date and included in the regular project reports.

[21] Where there are multiple contractors working on the project, each shall nominate a representative as appropriate.

The GCCT shall hold quarterly update meetings to discuss ways to strengthen resources and GBV and VAC support for employees and community members.

4.2 Making Complaints: GBV and VAC Allegation Procedures

All staff, volunteers, consultants and sub-contractors are encouraged to report suspected or actual GBV or VAC cases. Managers are required to report suspected or actual GBV and/or VAC cases as they have responsibilities to uphold company commitments and they hold their direct reports accountable for complying with the Individual Code of Conduct.

The project will provide information to employees and the community on how to report cases of GBV and VAC Code of Conduct breaches through the GM. The GCCT will follow up on cases of GBV, VAC and Code of Conduct breaches reported through the GM.

Grievance Mechanism

The project operates a GM which is managed by a designated GM operator with the project implementation unit. Reports of GBV or VAC, other complaints, or other concerns may be submitted online, via telephone or mail, or in person.

All complaints regarding GBV and VAC must immediately be reported to the World Bank task team by the GM operator.

The GM operator will refer complaints related to GBV or VAC to the GCCT to resolve them. In accordance with the GBV and VAC Action Plan, the GCCT, through the Service Provider and Focal Point(s) will investigate the complaint and ultimately provide the GM operator with a resolution to the complaint, or the Police if necessary. The victim's confidentiality should also be kept in mind when reporting any incidences to the Police.

The GM operator will, upon resolution, advise the complainant of the outcome, unless it was made anonymously. Complaints made to managers or the Service Provider will be referred by them to the GM for processing.

If the complaint to the GM is made by a survivor or on behalf of a survivor, the complainant will be directly referred to the service provider to receive support services while the GCCT investigates the complaint in parallel.

Service Provider

The Service Provider is a local organization which has the experience and ability to support survivors of GBV or VAC. The client, the contractor(s) and consultant must establish a working relationship with the Service Provider, so that GBV and VAC cases can safely be referred to them. The Service Provider will also provide support and guidance to

the GBV and VAC Focal Points as necessary. The Service Provider will have a representative on the GCCT and be involved in resolving complaints related to GBV or VAC.

GCCT GBV and VAC Focal Points

The GCCT shall confirm that all complaints related to GBV or VAC have been referred to the World Bank by the GM operator.

The GCCT shall consider all GBV and VAC complaints and agree on a plan for resolution. The appropriate

Focal Point will be tasked with implementing the plan (i.e. issues with contractor's staff will be for the contractor to resolve; consultant's staff the consultant; and client staff the client). The Focal Point will advise the GCCT on resolution, including referral to the Police if necessary. They will be assisted by the Service Provider as appropriate.

All the Focal Points on the GCCT must be trained and empowered to resolve GBV and VAC issues. It is essential that all staff of the GM and GCCT understand the guiding principles and ethical requirement of dealing with survivors of GBV and VAC. All reports should be kept confidential and referred immediately to the Service Provider represented on the GCCT[22]. In GBV and VAC cases warranting Police action, the Focal Points must appropriately refer the complaint to: (i) the authorities; (ii) the Service Provider; and, (iii) management for further action. The client and the World Bank are to be immediately notified.

4.3 Accountability Measures

All reports of GBV or VAC shall be handled in a confidential manner to protect the rights of all involved. The client, contractor and consultant must maintain the confidentiality of employees who notify any acts or threats of violence, and of any employees accused of engaging in any acts or threats of violence (unless a breach of confidentiality is required to protect persons/property from serious harm or where required by law). The contractor and consultant must prohibit discrimination or adverse action against an employee because of survivor's disclosure, experience or perceived experience of GBV or VAC.

[22] Survivors of GBV and VAC may need access to Police, justice, health, psychosocial, safe shelter and livelihood services to begin on a path of healing from their experience of violence.

To ensure that survivors feel confident to disclose their experience of GBV or VAC, they can report cases of GBV or VAC through multiple channels: (i) online, (ii) phone, (iii) in-person, (iv) the local service provider, (v) the manager(s), (vi) village councils; or, (vii) the Police. To ensure confidentiality, only the service provider will be privy to information regarding the survivor. The GCCT will be the primary point of contact for information and follow-up regarding the perpetrator.

4.4 Monitoring and Evaluation

The GCCT must monitor the follow up of cases that have been reported and maintain all reported cases in a confidential and secure location. Monitoring must collect the number of cases that have been reported and the share of them that are being managed by Police, NGOs etc.

These statistics shall be reported to the GM and the Supervision Engineer for inclusion in their reporting.

For any GBV and VAC cases warranting Police action, the client and the World Bank are to be immediately notified.

4.5 Awareness-raising Strategy

It is important to create an Awareness-raising Strategy with activities aimed to sensitize employees on GBV and VAC on the work site and its related risks, provisions of the GBV and VAC Codes of Conduct, GBV and VAC Allegation Procedures, Accountability Measures and Response Protocol. The strategy will be accompanied by a timeline, indicating the various sensitization activities through which the strategy will be implemented and the related (expected) delivery dates. Awareness-raising activities should be linked with trainings provided by the Service Provider.

4.6 Response Protocol

The GCCT will be responsible for developing a written response[23] protocol to meet the project requirements, in accordance to national laws and protocols. The response protocol must include mechanisms to notify and respond to perpetrators in the workplace (See 4.9 for Perpetrator Policy and Response). The response protocol will include the GM process to ensure a competent and confidential response to disclosures of GBV and VAC. An employee who discloses a case of GBV or VAC in the workplace shall be referred to the GM for reporting.

[23] Develop appropriate protocol for written recording of GBV issues and VAC raised in case the notes are subpoenaed. Develop processes for record keeping including activities undertaken by the GCCT.

4.7 Survivor Support Measures

It is essential to appropriately respond to the survivor's complaint by respecting the survivor's choices to minimize the potential for re-traumatization and further violence against the survivor. Refer the survivor to the Service Provider to obtain appropriate support services in the community—including medical and psychosocial support, emergency accommodation, security including Police protection and livelihood support—by facilitating contact and coordination with these services. The client, contractor or consultant may, where feasible, provide financial and other supports to survivors of GBV or VAC for these services.

If the survivor is an employee, to ensure the safety of the survivor, and the workplace in general, the client, contractor or consultant, in consultation with the survivor, will assess the risk of ongoing abuse to the survivor and in the workplace. Reasonable adjustments will be made to the survivor's work schedule and work environment as deemed necessary. The employer will provide adequate leave to survivors seeking services after experiencing violence.

4.8 Perpetrator Policy and Response

Encourage and accept notification through the GM from employees and community members about perpetrators in the workplace. Through the GCCT and/or the Service Provider, oversee the investigation of these grievances, ensuring procedural fairness for the accused, and within the local laws. If an employee has breached the Code of Conduct, the employer will act, which could include:

i. Undertake disciplinary action up in accordance with sanctions in the GBV and VAC Codes of Conduct;

ii. Report the perpetrator to the Police as per local legal paradigms; and/or

iii. If feasible, provide or facilitate counselling for the perpetrator.

5.0 Sanctions

In accordance with the Code of Conduct, any employee confirmed as a GBV or VAC perpetrator shall be considered for disciplinary measures in line with sanctions and practices as agreed in the Individual Code of Conduct. It is important to note that, for each case, disciplinary sanctions are intended to be part of a process that is entirely internal to the employer, is placed under the full control and responsibility of its managers, and is conducted in accordance with the applicable national labor legislation.

Such a process is expected to be fully independent from any official investigation that competent authorities (e.g. Police) may decide to conduct in relation to the same case,

and in accordance with the applicable national law. Similarly, internal disciplinary measures that the employer's managers may decide to enact are meant to be separate from any charges or sanctions that the official investigation may result into (e.g. monetary fines, detention etc.).

14.14 Annex 14: Potential Procedures for Addressing GBV and VAC

Accountability Measures to maintain confidentiality can be achieved through the following actions:

1. Inform all employees that the confidentiality of GBV/VAC survivors' personal information is of utmost importance.

2. Provide the GCCT with training on empathetic and non-judgmental listening.

3. Take disciplinary action, including and up to dismissal, against those who breach survivor's confidentiality (this is unless a breach of confidentiality is necessary to protect the survivor or another person from serious harm, or where required by law).

GBV and VAC Allegation Procedures should specify:

1. Who survivors can seek information and assistance from.

2. The process for community members and employees to lodge a complaint through the GM should there be alleged GBV or VAC.

3. The mechanism for how community members and employees can escalate a request for support or notification of violence if the process for reporting is ineffective due to unavailability or non-responsiveness, or if the employee's concern in not resolved.

Financial and Other Supports to survivors can include:

1. No/low interest loans.

2. Salary advances.

3. Direct payment of medical costs.

4. Coverage of all medical costs related specifically to the incident.

5. Upfront payments for medical costs to later be recouped from the employee's health insurance.

6. Providing or facilitating access to childcare.

7. Providing security upgrades to the employee's home.

8. Providing safe transportation to access support services or to and from accommodation.

Based on the rights, needs and wishes of the survivor, survivor support measures to ensure the safety of the survivor who is an employee can include[24]:

1. Changing the perpetrator or survivor's span of hours or pattern of hours and/or shift patterns.

2. Redesigning or changing the perpetrator or survivor's duties.

3. Changing the survivor's telephone number or email address to avoid harassing contact.

4. Relocating the survivor or perpetrator to another work site/ alternative premises.

5. Providing safe transportation to and from work for a specified period.

6. Supporting the survivor to apply for an Interim Protection Order or referring them to appropriate support.

7. Taking any other appropriate measures including those available under existing provisions for family friendly and flexible work arrangements.

Leave options for survivors that are employees can include:

1. An employee experiencing GBV should be able to request paid special leave to attend

[24] It is critical that a survivor centered approach be adopted. The survivor should be fully involved in the decision making. Except for exceptional circumstances the perpetrator should be required to take appropriate actions to accommodate the survivor (e.g. move, change hours, etc.), rather than the survivor changing.

medical or psychosocial appointments, legal proceedings, relocation to safe accommodation and other activities related to GBV.

2. An employee who supports a person experiencing GBV or VAC may take care givers leave, including but not limited to accompanying them to court or hospital, or to take care of children.

3. Employees who are employed in a casual capacity may request unpaid special leave or unpaid care givers leave to undertake the activities described above.

4. The amount of leave provided will be determine by the individual's situation through consultations with the employee, the management and the GCCT where appropriate.

Potential Sanctions to employees who are perpetrators of GBV and VAC include:

1. Informal warning
2. Formal warning
3. Additional Training
4. Loss of up to one week's salary.
5. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
6. Termination of employment.
7. Referral to the Police or other authorities as warranted.

14.15 Annex 15: Voluntary Land Donation or Lease Form

This form or an equivalent document is to be used to record the consent of landowners who offer private land for a good community activity. The essentials of voluntary donation are that the donors have been freely consulted prior to the donation, were not pressured or coerced, that the donation will not affect a significant proportion (more than 10%) of their productive assets, and that they have the right to refuse and to lodge a complaint if they have a grievance about the process.

Consent Form for Voluntary Donation

I/We: _____ male household head _____female household head, and/or person(s) exercising customary rights over land described as (legal description, GPS coordinates if available) in

Village_____

Island_____

Province _____

Hereby declare that I/we/the group are the owners/users of the land required for (description):

_____

I/we are voluntarily donating the use of land and or/ land-based assets (land area, type of assets /trees/crops, etc.) _____

for the purpose of: (specify activity)

_____

_____

We agree to this purpose from (date)_____ for as long as the purpose is served *or* until (specify end date, typically the life expectancy of the facility) _____

I/we make this donation of My/Our own free will. I/We are waiving My/Our right to compensation of any kind for the specified duration of the activity.

I/We affirm that we have been fully and freely consulted and informed about the activity prior to agreement, have not been subject to any form of coercion, understand that I/we have the right to refuse, and to seek redress for any grievance concerning this transaction.

Signed:

Male household head _____ /Female household head_____

Chief or Local Custom Authority_____

14.16 Annex 16: Detailed ESMP Checklist for Sub-Projects Screening

Inspection Items	YES/NO	Remarks (Specify location, good practices, problem observe, possible causes of non-conformity and proposed corrective/preventative actions, etc.)
A. Environmental and Social ---- Management		
1.0 Regulatory Compliances		
1.1 Appropriate permissions/ approvals/ clearances obtained before commencement of construction	[ ] Yes/ [ ] No	Attach copies during the assessment period
1.2 EPA permit obtained for construction works?	[ ] Yes/ [ ] No	Attach copy
1.3 Construction Environmental Management Plan developed prior to construction works	[ ] Yes/ [ ] No	
1.3. Intimation given about the distribution line project to relevant institutions and agencies?	[ ] Yes/ [ ] No	
2.0 Air & Water Quality		
2.1 Regular sprinkling of water to suppress dust emissions during dry season?	[ ] Yes/ [ ] No	

2.2 Idling construction vehicles are shut-down/ switched-off to arrest vehicular exhaust fumes and mitigate air pollution?	[ ] Yes/ [ ] No	
2.3 Appropriate measures taken to prevent oil/ lubricants/ wastewater/ cement/ other contaminants from entering into water bodies?	[ ] Yes/ [ ] No	
2.4 Excavated area has been backfilled and compacted properly?	[ ] Yes/ [ ] No	
2.5 Excavated topsoil properly stored and covered to prevent erosion during the rainy season	[ ] Yes/ [ ] No	
2.6 Excess soil removed and disposed from the site	[ ] Yes/ [ ] No	
3.0 Waste Management		
3.1 Waste Management Procedure is developed for management of both hazardous and non-hazardous waste?	[ ] Yes/ [ ] No	Attach copy of waste management plan
3.2 Installation of garbage bins for bio-degradable, recyclable and unrecyclable?	[ ] Yes/ [ ] No	
3.3 Disposal of segregated construction waste at designated disposal sites?	[ ] Yes/ [ ] No	
3.4 All waste and construction materials from worksite are removed from working areas	[ ] Yes/ [ ] No	
All waste and construction materials from worksite are	[ ] Yes/ [ ] No	

stacked in designated storage areas		
4.0 Noise		
4.1 Construction site properly barricaded?	[ ] Yes/ [ ] No;	
4.2 Only well-maintained mechanical equipment is operated on-site?	[ ] Yes/ [ ] No;	
4.3 Shut down or throttle down to a minimum equipment that may be intermittent in use?	[ ] Yes/ [ ] No;	
4.4 Scheduled noisy activities during the morning hours informing the locals when noisy activities are planned?	[ ] Yes/ [ ] No;	
4.5 Provide ear plugs or mufflers for workers to reduce vibration on construction equipment?	[ ] Yes/ [ ] No;	
5.0 Occupational Health and safety		
5.1 Risk assessment is conducted and analyzed for the given task?	[ ] Yes/ [ ] No	
5.2 If high risk involved, has the Standard Working Procedure been followed?	[ ] Yes/ [ ] No	
5.3 Occupational Health and Safety Standards are in Place?	[ ] Yes/ [ ] No	
5.4 Occupational Health and Safety Standards are met?	[ ] Local; [ ] International; [ ]	

	Company	
5.5 Installation of Road Signs to warn pedestrians/ motorists?	[ ] Yes/ [ ] No	
5.6 Installation of Diversion Signs to warn pedestrians/ motorists?	[ ] Yes/ [ ] No	
5.7 Installation of Danger Signs to warn pedestrians/ motorists?	[ ] Yes/ [ ] No	

5.8 Safety Officer is available onsite and knowledgeable of associated risks/hazards?	[ ] Yes/ [ ] No	
5.9 Standard Operating Procedure for the given task available onsite?	[ ] Yes/ [ ] No	
5.10 Daily Tool Box Talk is conducted and recorded?	[ ] Yes/ [ ] No	
5.11Construction Crew is equipped with appropriate Safety Gear or Personal Protective Equipment (PPEs)?	[ ] Yes/ [ ] No	
5.12 Safety precaution are adhered while working at heights?	[ ] Yes/ [ ] No	
5.13 Trained First Aider available to administer first aids?	[ ] Yes/ [ ] No	
5.14 Emergency	[ ] Yes/ [ ] No	

Response/Vehicles/Contact details available?		
5.15Any accident/incident/Near miss occurred during construction works?	[ ] Yes/ [ ] No	
Accident/Near miss recorded and reported?	[ ] Yes/ [ ] No	Attach records/photographs
5.16 Construction Vehicles maintain speed limits?	[ ] Yes/ [ ] No	
5.17 Construction workers are aware about Health and Hygiene?	[ ] Yes/ [ ] No	
5.18 Construction workers are provided with safe drinking water?	[ ] Yes/ [ ] No	
5.19 Construction workers are provided with appropriate resting area/shed during lunch/rest time?	[ ] Yes/ [ ] No	
6.0 Flora and Fauna		
6.1 Critical biodiversity areas avoided during construction works	[ ] Yes/ [ ] No	
6.2 Right-of ways utilized to avoid important natural areas such as wild lands and sensitive habitats.	[ ] Yes/ [ ] No	
7.0 Social Management		
7.1 Public sensitization conducted?	[ ] Yes/ [ ] No	attach public sensitization plan

7.2 Information of working hours and type of work shared with community members?	[ ] Yes/ [ ] No	
7.3 Local Un-skilled workers have been engaged?	[ ] Yes/ [ ] No	
7.4 Their payment is made on?	[ ] Daily; [ ] Weekly; [ ] Monthly basis	
7.5 Reported cases of Child Labor?	[ ] Yes/ [ ] No	
7.6 Reported cases of sexual exploitation?	[ ] Yes/ [ ] No	
7.7 Construction workers are aware about Communicable diseases, including Mpox, STD, Venereal diseases?	[ ] Yes/ [ ] No	
7.8 Places/ Spaces/ Objects of Historic, Cultural, and Religious Sites found in/around the RoW and working areas?	[ ] Yes/ [ ] No; If Yes, To whom and How it was reported	
379 Is Grievance Mechanism (GM) in place?	[ ] Yes/ [ ] No	**Document grievances** (Workforce, Project Affected Persons) and conflict resolution activities;
7.10 Number of Grievances Redressed?		Specify:
7.11 Any case of dissatisfied recipient?	[ ] Yes/ [ ] No;	Reasons for dissatisfaction:

7.12 Number of Grievance Redressals Pending?		Specify:
7.13 Reasons for pending cases		State Reason (s): 1._____ _____ _____ _____ 2._____ _____ _____ _____
Attach copies of the GM Register for the reporting duration		

Signed by Environment Specialist:

Name: _____

_____

Title: _____

_____ Date: _____

Date: _____

Signed by Project Manager:

Name:

Title:

Date: _____

14.17 14 17 Annex 17: ESHS Clauses for Construction Contractor

Adequate selection of the project site and right of way, and appropriate project design can have a significant influence on the magnitude of the associated environmental impacts and the proper environmental management of energy and electricity distribution projects in Sierra Leone. As such, the EA for projects involving any new constructions should provide information on screening criteria for site selection and design, including the following:

- Site selection

- Sites should be chosen based on community needs for additional projects, with specific lots chosen based on geographic and topographic characteristics. The site selection process involves site visits and studies to analyze:
- The site's urban, suburban, or rural characteristics;
- National, counties, or municipal regulations affecting the proposed lot;
- Accessibility and distance from inhabited areas; o Land ownership, including verification of absence of squatters and/or other potential legal problems with land acquisition;

Determination of site vulnerability to natural hazards (i.e., intensity and frequency of floods, earthquakes, landslides, hurricanes, volcanic eruptions);

- Suitability of soils and subsoils for construction;
- Site contamination by lead or other pollutants;
- Flora and fauna characteristics;
- Presence or absence of natural habitats (as defined by ESS 4) and/or ecologically important habitats on site or in vicinity (e.g., forests, wetlands, coral reefs, rare or
- endangered species); and
- Historic and community characteristics.

After choosing an appropriate site and design, the contractor needs to prepare his own EMP, including health and safety at the construction site, a traffic management plan, a waste management plan, chance-find procedures for physical cultural resources, etc. The EMP needs to be approved by the EPA and the World Bank. The contractor is responsible for the implementation of the EMP and is supervised by an independent consultant.

As construction activities could cause significant impacts on and nuisances to surrounding areas, careful planning of construction activities is critical. These are generally consistent for all power generation activities due to the similarity of the works involved. The following rules (including specific prohibitions and construction management measures) should be incorporated into all relevant bidding documents, contracts, and work orders.

Prohibitions:

The following activities are prohibited on or near the project site:

(1) Cutting of trees for any reason outside the approved construction area;

(2) Hunting, fishing, wildlife capture, or plant collection;

(3) Use of unapproved toxic materials, including lead-based paints and asbestos;

(4) Disturbance to anything with architectural or historical value;

(5) Building of fires;

(6) Use of firearms (except authorized security guards); and

(7) Use of alcohol by workers.

Construction management measures:

Dust and other air pollution emissions:

(1) Watering of surfaces and/or chemical stabilization

(2) Reduction of surface wind speed with windbreaks or source enclosures

(3) Covering the road surface with a new material of lower silt content

(4) Grading of gravel roads

(5) Proper site enclosure through appropriate hoarding and screening;

(6) Maintaining minimal traffic speed on-site and on access roads to the site;

(7) Covering all vehicles hauling materials likely to give off excessive dust emissions;

(8) Ensuring adequate maintenance and repair of construction machinery and vehicles;

(9) Avoiding burning of material resulting from site clearance;

(10) Covering any excavated dusty materials or stockpile of dusty materials entirely by impervious sheeting;

(11) The provision of water troughs at entry and exit points to prevent the carryover of dust emissions, beyond the construction site

(12) Proper truck maintenance

(13) Turning off equipment when not in use ***Noise****:*

(1) Enclosing the site with barriers/fencing

(2) Effectively utilizing material stockpiles and other structures to reduce noise from on- site construction activities

(3) Choosing inherently quiet equipment

(4) Operating only well-maintained mechanical equipment on-site

(5) Maintaining all construction-related traffic at or below 15 mph on streets within 200 m of the site.

(6) Maintaining all on-site vehicle speeds at or below 10 mph.

(7) To the extent possible, maintaining noise levels associated with all machinery and equipment at or below 90 db.

(8) Keeping equipment speed as low as possible

(9) Shutting down or throttling down to a minimum equipment that may be intermittent in use

(10) Utilizing and properly maintaining silencers or mufflers that reduce vibration on construction equipment

(11) Restricting access to the site for truck traffic outside of normal construction hours

(12) Proper site logistics and planning

(13) Limiting site working hours if possible

(14) Scheduling noisy activities during the morning hours

(15) Informing the locals when noisy activities are planned

Solid waste management:

(1) Use of generated construction debris materials for reclamation purposes whenever applicable, after ensuring the absence of contamination and the adequacy of the physical and chemical properties of such material

(2) Minimization of construction and demolition wastes through careful planning during the design stage, whereby reducing or eliminating over-ordering of construction materials

(3) Sorting of construction and demolition wastes into various categories and adopting reuse/recycle on site whenever deemed feasible.

(4) Segregating chemical wastes and properly storing and disposing of it as hazardous waste.

(5) Storing chemical wastes in a separate area that has an impermeable floor, adequate ventilation and a roof to prevent rainfall from seeping

(6) Clearly labeling all chemical waste in English and Sierra Leone languages, storing it in corrosion-resistant containers and arranging so that incompatible materials are adequately separated

(7) Securing a prior agreement with the EPA for the disposal of hazardous waste generated on-site

(8) Drafting an agreement with the solid waste collector in the county where the project is being implemented to identify collection sites and schedule the removal to minimize odor, pest infestation and litter buildup

(9) Prohibiting the burning of refuse on the construction site

(10) Promoting recycling and reuse of general refuse. ***Wastewater management***

(1) Provide channels, earth bunds or sand bag barriers to properly direct storm water to silt removal facilities

(2) Use adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins before discharge into the surrounding waters

(3) Maintain silt removal facilities by regularly removing deposited silt and grit

(4) Discharge rainwater pumped out from trenches or foundation excavations into storm drains via silt removal facilities and not directly to the aquatic environment

(5) Cover open stockpiles of construction materials on site with tarpaulin or similar fabric during rainstorm events to prevent the washing away of construction materials

(6) Compact earthworks as soon as the final surfaces are formed to prevent erosion especially during the wet season

(7) Collect and connect water used in vehicle and plant servicing areas to foul sewers via an oil/grease trap. Oil leakage or spillage should be contained and cleaned up immediately

(8) Collect spent oil and lubricants and store them for recycling or proper disposal

(9) Prepare guidelines and procedures for immediate clean-up actions following any spillages of oil, fuel or chemicals.

(10) Contain sewage from toilets, kitchens and similar facilities in sanitary cesspools before being transported by trucks to a nearby wastewater treatment plant

Health and safety

(1) Restriction of access to the construction site by proper fencing

(2) Establishment of buffering areas around the site

(3) Provision of guards on entrances and exits to the site

(4) Installation of warning signs at the entrance of the site to prohibit public access

(5) Provision of training about the fundamentals of occupational health and safety procedures

(6) Provision of appropriate personal protective equipment (PPE) (impermeable latex gloves, working overalls, safety boots, safety helmets, hearing protecting devices for workers exposed to noise levels exceeding 90 dBA, and lifesaving vests for construction sites near water bodies) that workers can swim and that lifesaving rings are available at the worksite, near water

(7) Ensuring that the protective material is being used wherever it is required

(8) Ensuring that especially sensitive or dangerous areas (like areas exposed to high noise levels, areas for especially hazardous work, etc.) are clearly designated

(9) Ensuring that all maintenance work necessary for keeping machines and other equipment in a good state will be regularly carried out.

(10) Ensuring that the workers are qualified, well-trained, and instructed in handling their equipment, including health protection equipment.

(11) Provision of adequate loading and off-loading space

(12) Development of an emergency response plan

(13) Provision of on-site medical facility/first aid

(14) Provision of appropriate lighting during night-time works

(15) Implementation of speed limits for trucks entering and exiting the site

(16) Ensuring that hazardous substances are being kept in suitable, safe, adequately marked, and locked storage places

(17) Ensuring that containers of hazardous substances are clearly marked, and that material safety data sheets are available

(18) Ensuring that all workers dealing with hazardous substances are adequately informed about the risks, trained in handling those materials, and trained in first aid measures to be taken in the case of an accident

(19) Designating an area where contaminated materials and hazardous waste can be stored for proper disposal according to environmental guidelines

(20) The adoption of good housekeeping practices for ensuring hygiene on site

(21) The elimination of pools of stagnant water, which could serve as breeding places for mosquitoes

(22) The provision of bed nets for workers living on site.

(23) The appropriate elimination of waste of all types, including wastewater

(24) The provision of a safety specialist responsible for the preparation, implementation and maintenance of a comprehensive safety program

(25) For the construction of fuel supply facilities, provision of fire-fighting equipment such as dry powder extinguishers

(26) Conducting fire-fighting and leak checks training drills for the construction staff

(27) Prohibition of smoking as well as litter or weed build-up in the area as these may pose fire risks

Environmental Supervision during Construction

The bidding documents should indicate how compliance with environmental rules and design specifications would be supervised, along with penalties for non-compliance by contractors or workers. Construction supervision requires oversight of compliance with the manual and environmental specifications by the contractor or his designated environmental supervisor. Contractors are also required to comply with national and municipal regulations governing the environment, public health, and safety.

14.18 14.18 Annex 18: Chance Find Procedure

Chance finds are defined as physical cultural resources encountered unexpectedly during project implementation. Chance Find Procedures includes provisions for managing the aforementioned encountered chance finds. These include the following:

- In the case of a chance finding any sites or artifacts of historical, cultural, archeological, or religious significance, all construction activity in the vicinity of the find/feature/site will cease immediately.
- The discovery will be clearly delineated and secured, and all found remains will be left in situ.
- An EPA assigned archaeological consultant will assess, record and photograph the find/feature/ site.
- In consultation with the Ministry of Information, Culture and Tourism, the assigned Archaeologist will complete a report on the findings and determine the appropriate course of action to take.
- An on-site finds storage area will be provided, allowing storage of any artifacts or other archaeological material recovered during the process.
- A conservator will be made available to the project, if required, and will decide on the disposition of any found samples or relics.
- Once authorization has been given by the Ministry of Information, Culture and Tourism, the proponent will be informed when works can resume.

14.19 14.19 Annex 19: Labor Management Plan

The project perceives the need to secure the principal rights of workers since the labor force is an important resource. Thus, making sure there is a healthy worker-management rapport, treating workers equitably, and providing them with safe working conditions are pivotal components to the sustenance of this project. This Labor Management Plan (LMP) is for the duration of the project construction phase. During the construction phase, labor requirements are often determined by the project work specification. It is the responsibility of the hired contractor to recruit personnel for the various classes of workers mentioned below. Although this LMP here is a generic one, it is expected that hired contractors develop specific labor management procedures for the different sub-projects.

The objectives of the labor management procedure are:

- To advance the reasonable treatment, non-segregation, and equivalent opportunity of workers
- To build up, keep up, and improve the worker-management relationship.
- To promote compliance with national employment and labor laws.
- To secure workers, including vulnerable categories of workers such as women.
- To promote safe and healthy working conditions and the health of workers.
- To avoid the use of forced and child labor.

The LMP follows the requirements outlined in ESS2, and it's captured in 1 to 6.

1. Types and number of Project Workers

The project will involve the following classes of workers:

Direct Workers
Are enrolled or engaged directly by the project to work exclusively with the project. 5 employees are dedicated to this project, who are mostly civil and public servants.

14.19.1 Contracted workers

Are enrolled or engaged through third parties to perform work related to the project. The precise number of contractors who will be employed is not known as of now. When

implementation begins, this information will be known. Components 1 and 2 may include minor construction and rehabilitation and will engage civil works contractors and workers.

14.19.2 Community Workers

Are enrolled from the community or nearby communities where the particular activity takes place. These will be employed on a needs basis.

2. Potential Labor Risks

As per the nature of the project activities, a major labor risk is envisaged.

Labor risks associated with Civil Works contractor workers at the subproject level: Local contractors who will be hired locally will implement subprojects, and all of them will be required to have a written contract consistent with the objective of ESS2, in particular about child and forced labor. The Child Rights Act of 2007 makes provision for the elimination of child labor, protection of children and young persons, and prohibition of hazardous child labor.

Labor risks, including labor influx and associated Sexual Exploitation and Abuse, Sexual Harassment, child labor, and forced labor**,** are viewed as low given the nature of project activities in components 1 and 2. Since civil works to be upheld under the project will be small in scale and prioritized by local communities themselves, the risk of forced labor is expected to be low. In any case, the contractor will be needed in the agreement to make commitments against the utilization of forced labor, and task staff responsible for contractor supervision will monitor and report the absence of forced labor.

Occupational Health and Safety (OHS) risks are viewed as low to moderate, contingent on the type of subproject works to be implemented. Notwithstanding, since the civil contractors' workers are probably an unskilled and untrained neighborhood populace, in any case, hazard remains that a few mishaps may happen that lead to injuries.

All contractors will be required to develop and implement written labor management procedures, including procedures to establish and maintain a safe working environment as per the requirements of the ESS2. All contractors will be required under the Environmental and Social Management Plan (ESMP) to ensure workers will use Personal Protective Equipment (PPE), receive basic safety training, and take other preventive actions as provided. A major risk is associated with climbing on electric poles, hence contractors' ESMP should cover this.

Employment Risks. Workers will be hired by the project, either directly as project staff or indirectly as part of contractors or service providers. There are a risks of unaccounted working hours and the lack of overtime compensation. Contractors should be encouraged to treat this as a major concern, as it normally leads to an uprising among workers.

3. Working Conditions and Management of Worker Relationships

In line with the requirements of ESS 2 and the laws of Sierra Leone, the project will adopt and implement human resources policies and procedures appropriate to its size and workforce that set out its approach to managing workers.

Documented information that is clear and understandable, regarding their terms and conditions of employment, their rights under the laws of Sierra Leone, and any applicable collective agreements, including their rights related to hours of work, wages, overtime, compensation, and benefits, will be provided by the project upon immediate enrolment and at any material change that might occur.

The project will base the enrollment on the principle of equitable opportunity, fair treatment, and non-discrimination concerning recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices. Measures will be taken to prevent and address harassment, intimidation, and/or exploitation, especially regarding women. The current minimum wage in Sierra Leone is Le 600,000 (USD 60).

A grievance mechanism for workers to raise workplace concerns is provided. During recruitment, the workers shall be informed of this mechanism and how to access it easily. The mechanism will involve 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 will also allow for anonymous complaints to be raised and addressed. The mechanism will not impede access to other judicial or administrative remedies that might be available under the law or through existing arbitration procedures, or a substitute for grievance mechanisms provided through collective agreements.

4. Protecting the Work Force

***Child Labor*:** The project won't utilize Children in any way that is monetarily exploitative or is likely to be risky or to meddle with the child's education, or to be unsafe to the child's wellbeing or physical, mental, spiritual, moral, or social development.

Under the Child Rights Act of 2007, the minimum age for admission of children into full-time employment is fifteen (15) as per section 125 of the Child Rights Act of 2007 and Section 52 of Chapter 212, Employers and Employed Act. The minimum age for the engagement of a child in light work is thirteen years as per section 127 subsection one of the child Right Act of 2007. However, the minimum age for engagement of persons in hazardous work is eighteen (18) as per section 128 subsection of the Child Rights Act of 2007 and Sections 47–56 of Chapter 212, Employers and Employed Act. The minimum age for employment or engagement set out in the World Bank's ESS 2 is age fourteen (14). The project will comply with the World Bank's minimum age and the laws of Sierra Leone.

This project will likewise guarantee that children younger than eighteen (18) are not employed in hazardous work. All work of people younger than eighteen (18) will be dependent upon appropriate risk assessment and regular monitoring of health, working conditions, and hours of work.

The GoSL has established institutional mechanisms for the enforcement of laws and regulations on child labor, which include the Ministry of Gender and Children's Affairs (MGCA), the Ministry of Justice's Director of Public Prosecution, and the Ministry of Internal Affairs' Police and Transnational and Organized Crime Unit. Their mandates include:

- to formulate, implement, and monitor compliance with child labor regulations through its Child Labor Unit.
- enforce labor laws in the formal sector.
- embark on nationwide sensitization and popularization of the labor migration policy, impacting child labor.
- to undertake criminal proceedings, including enforcement of criminal laws against forced child labor.

If a minor under the minimum labor eligibility age is discovered working on the project, measures will be taken to immediately terminate the employment or engagement of the minor in a responsible manner, taking into account the best interest of the minor.

This project will not employ forced labor, which consists of any work or service not voluntarily performed.

5. Occupational Health and Safety

This project will take steps to prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, as far as reasonably and practicable. The project will address areas that include the:

- identification of potential hazards to workers, chiefly those that may be life-threatening;
- provision of preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances;
- training of workers;
- documentation and reporting of occupational accidents, diseases, and incidents; and
- emergency prevention, preparedness, and response arrangements.

6. Workers Engaged by Third Parties

Concerning contracted workers, the project will make reasonable efforts to ascertain that the third parties who engage contracted workers are reputable and legitimate organizations and have an appropriate labor management procedure. The project will establish policies and procedures for managing and monitoring the performance of such third-party employers, in accordance with the requirements of this ESS.

Also, the project will incorporate these requirements in contractual agreements with such a third party. Contracted workers will have access to a grievance mechanism. In cases where the third party employing or engaging the workers is not able to provide a grievance mechanism to such workers, the project's grievance mechanism will be available to the contracted workers.

Contractors' labor management records and reports that may be reviewed would include:

- representative samples of employment contracts or arrangements between third parties and contracted workers,
- records relating to grievances received and their resolution,
- reports relating to safety inspections, including fatalities and incidents, and implementation of corrective actions,
- records relating to incidents of non-compliance with national law, adherence to the applicable contractor workers code of conduct, and
- records of training provided for contracted workers to explain occupational health and safety risks and preventive measures.

7. Incident and Accident Reporting

In case of manifestation of an incident or accident-related or having an impact on this project which has, or is likely to have, a substantial adverse effect on the environment, the affected communities, the public, or workers, the implementing agency shall:

- Not later than five (5) calendar days after having been informed of such incident or accident, inform the Bank by any electronic means of its nature, or circumstance, and any effect or impact resulting or likely to result therefrom as soon as reasonable and practicable.
- Not later than twenty (20) days after such incident or accident, provide the Bank with a summary report that includes a description of the incident or accident, and the measures, if any, that EDSA is taking or plans to take to address it and to prevent any future similar event as reasonable and practicable, and

- Keep the Bank informed of the ongoing implementation of the said measures and plans.

Regular reporting:

- Accidents and grievance logbooks are placed in all construction sites
- The supervision consultants' monthly progress report will provide details on accidents
- All regular progress reports to the Bank will include information on accidents and incidents
- Any severe injury (requiring off-site medical care) or fatality incident shall be reported to the Bank within 24 hours with basic information, and a detailed incident report, including the following, will be submitted within 10 working days:

a. root cause analysis and
b. corrective action plan on
c. immediate mitigation measures in case of continuing danger (e.g. fencing, signboard, guards)

d. Compensation to the affected family based on a clear rationale iii. risk assessment and correct application of ESHS management procedures, and iv. medium- and long-term mitigation measures, including enhancement of safety measures, audits, and additional training.

14.20 14.20 Annex 20: DRE Companies ESMS - Basic Requirements

The ESMS is a set of principles, requirements, processes, and tools that help integrate environmental and social risk management into a mini-grid developer's core business process. It is a set of actions and procedures that are implemented with the developer's existing risk management procedures.

The ESMS ensures that the mini grid developer's activities comply with its own environmental and social commitments, national regulations of the country where they operate, and environmental and social standards of international lenders and investors. It helps the developer to avoid and manage projects with potential environmental and social risks by conducting due diligence during design, construction, and operation of mini grids, and adequate monitoring of projects during construction and operation

Human Resources Policy

DRE companies will have in place an HR policy that expresses its commitments, at a minimum to: (1) comply with all relevant national labor laws and regulations; (2) promote

the fair treatment, non-discrimination, and equal opportunity for workers; (3) establish, maintain, and improve the worker-management relationship; (4) allow workers' organizations and collective bargaining; (5) have in place a grievance mechanism for workers; (6) not to employ forced labor or child labor, including not hiring workers below minimum age, as defined by national law and not employ children in hazardous work.[25]

DRE companies will adopt and implement human resources policies and procedures appropriate to its size and workforce that set out its approach to managing workers consistent with the requirements of national law. It will provide workers with documented information that is clear and understandable, regarding their rights under national labor and employment law and any applicable collective agreements, including their rights related to hours of work, wages, overtime, compensation, and benefits upon beginning the working relationship and when any material changes occur. It will provide and inform workers of an internal grievance process to raise their workplace concerns.

Occupational Safety & Health Policy/ Guideline

DRE companies will provide a safe and healthy work environment, taking into account inherent risks in its particular sector and specific classes of hazards in the work areas, including physical, chemical, biological, and radiological hazards, and specific threats to women. It will take steps to prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, as far as reasonably practicable, the causes of hazards. OHS Guideline will also include steps, as relevant, for Mpox prevention. It will also include a concrete plan for monitoring compliance with the Guideline in the SHS company operations.

Battery Collection/Recycling Policy

If the DRE company has an existing battery collection and/or recycling policy, this should be submitted with the application.

It is preferred that batteries are recycled to potentially reuse some of their components, where economically and technically feasible. This would be equally applicable for expired batteries and the batteries that will be replaced within the warranty period due to a manufacturing fault or reasons outlined in the warranty conditions.

[25]Employees may only be taken if they are at least 15 years old, as defined in the ILO Minimum Age Convention (C138, Art. 2). Children under the age of 18 will not be employed in hazardous work. Children will not be employed in any manner that is economically exploitive, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health, or physical, mental, spiritual, moral, or social development.

The company shall systematically collect used battery units and engage with communities on the importance of recycling if such a program is in place. The suggested options that can be considered are:

A. Collection of Batteries by SHS Companies: SHS company representatives will make arrangements to collect the battery units from the consumer and store it in the local offices. SHS company will take necessary measures to ensure the safe storage of the batteries. It may be feasible for the DRE company to send the warranty-expired batteries to a central location.

B. Potential battery disposal/recycling options can be as follows:

- Buy-back arrangements with manufacturers: DRE company can put in place buy-back arrangements with the battery manufacturers and ensure safe transportation of the batteries to the manufacturer. DRE company and manufacturers can mutually decide on cost sharing of collection and transportation of expired batteries, for example, sign a Memorandum of Understanding signed between them.
- Recycling at own facilities: DRE companies may consider establishing their own recycling facilities. Recycling lithium-ion batteries is possible, but according to research and practice, it makes little economic sense. Lithium-ion batteries can be recycled, but only at specified locations. Projects are currently underway in Europe, the United States, and Japan to develop effective and feasible recycling technologies with a complete life cycle analysis of recycling.
- Recycling at centralized locations in the country: If recycling facilities for lithium-ion batteries exist, DRE companies must use those that are inspected by EDSA and the Ministry of Environment and are considered safe and compliant with national regulations and World Bank standards;
- Disposal: Lithium-ion batteries may qualify as household hazardous waste.[26] SHS company will ensure that the batteries are disposed of in a particular designated area, ensuring environmental and occupational health and safety in line with World Bank E&S standards and Environmental, Health, and Safety Guidelines of the World Bank Group. DRE companies will also comply with the government regulations, if any, regarding the disposal of any of the components used in the battery units.

[26] In some countries, they are classified as non-hazardous waste.