MINISTRY OF INFORMATION AND COMMUNICATIONS



REPUBLIC OF SIERRA LEONE

SIERRA LEONE DIGITAL TRANSFORMATION PROJECT (P177077)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

DRAFT FINAL

JUNE 2022

Executive Summary

Project Background

Sierra Leone is a small country in West Africa with a total population of 7.9 million, of which approximately 75 percent are under 35 years. The country is known for its rich mineral resources, agricultural and marine resources. However, Sierra Leone faces multiple development challenges, including poverty, rapid growth of the youth population, high youth unemployment, and weak institutions. Sierra Leone's economy remains highly dependent on agriculture and natural resources for revenue, as it struggles to expand its labour market, increase productivity, and create jobs for its youth population. The country also has limited access to high-speed internet connectivity, affordable handsets, digital skills, and literacy.

Although the Government of Sierra Leone (GoSL) is committed to transforming its economy based on a more inclusive and human-centric digital growth and development approach, there are significant constraints to advancing digital transformation in Sierra Leone. According to the Digital Economy for Africa (DE4A) Country Diagnostic conducted for Sierra Leone in 2020, the challenges that Sierra Leone faces in achieving its vision, includes high prices of connectivity and devices, significant gaps in access to broadband internet for rural, women and marginalized groups, inadequate capacity, and skills to capitalize on digital opportunities, poor security of critical infrastructure, and low awareness of cybersecurity threats. Despite these challenges, there is a significant potential for digital technologies and digitally enabled innovation to contribute to increasing overall socioeconomic resilience in the country.

Project Development Objective (PDO)

The proposed Sierra Leone Digital Transformation Project (SL DTP) aims to increase digital adoption and digital literacy, improve e-government services, broadband market policy and regulation as well as fostering environment for mainstreaming digital solutions. The PDO is to expand access to broadband internet, enhance digital skills and improve government capacity to deliver public services digitally.

Need for SL DTP Intervention

SL DTP reflects the Government of Sierra Leone's commitment to transforming the economy of Sierra Leone based on a more inclusive and human-centered digital growth and development approach. The project is proposed to achieve the government's digital transformation vision, including the establishment of a National Digital Development Agency (NDDA), which will direct initiatives for an electronic government (e-government) and digital government, data protection, and cybersecurity. The interventions will meet the following needs:

- Need to Address Market Inefficiencies and Strengthen Regulatory Environment in Broadband Value Chain
- Need to Expand Access to Internet and Narrow Digital Divides for Inclusive Digital Growth
- Need to address digital literacy and digital skills gaps

- Low Digital-Skilled Society Hinders Leveraging Digital Innovative Solutions and Technologies
- Fragmented building blocks for digital government service delivery
- Need for Increasing Resilience of Digital Infrastructure, networks and services

Objectives/Scope of the ESMF

The primary purpose of this ESMF is to assist the Ministry of Information and Communications (MIC) in examining the environmental and social risks and impacts of the SL DTP activities. It serves as a guide to assess potential environmental and social risks and impacts of the SL DTP's activities when subprojects' locations cannot be determined during project preparation. It sets out the principles, rules, guidelines, and procedures to assess the potential environmental and social (E&S) risks and impacts. It provides adequate information on where subprojects are expected to be sited, including any potential E&S vulnerabilities of the setting; and on the potential impacts that may occur, and mitigation measures that might be appropriate. Specifically, the objectives of the ESMF include the following:

- Assess the potential environmental and social impacts of the Project.
- Establish clear procedures and methodologies at the subproject level, for screening, identification of environmental and social impacts and for mitigation, monitoring and institutional measures
- Develop an Environmental and Social Management Framework Guidelines for the mitigation of the potential negative impacts and for monitoring compliance with the relevant Environment and Social Standards (ESSs) of the ESF
- Assess the capacity and training of the implementing agencies at the national and local levels, to implement the developed environmental and social management framework; and
- Estimate and proposed budget for the implementation of the ESMF.

Project Components

The Sierra Leone Digital Transformation Project proposes four integrated and mutually reinforcing components with a fifth component dedicated to contingent response to future emergencies (*Contingent Emergency Response Component*, *CERC)*.

Component 1: Expanding Digital Access and Increasing Resilience of the Digital Environment (US$21.6 million)

This component aims to improve broadband market competition, expand access to broadband internet, and address existing digital divides in Sierra Leone. Sierra Leone continues to experience challenges in strategic parts of the broadband value chain, from the first mile where the internet enters the country to the last mile where it reaches end users. A mix of financing and technical assistance is expected to strengthen regulatory capacity and instruments to increase competition, lower prices and address some key connectivity gaps in Sierra Leone attracting private sector investments. The subcomponents proposed in this component are:

- Subcomponent 1.1. Broadband Market Policy and Regulation
- Subcomponent 1.2. Last-mile Connectivity Access for Public Institutions
- Subcomponent 1.3. Inclusive Access for Underserved and Marginalized Communities
- Subcomponent 1.4. Increasing Resilience of Digital Environment

Component 2. Digital Skills Development and Innovation (US$5.3 million)

This component aims to tackle Sierra Leone's digital literacy and innovation gaps by offering digital skills training for marginalized communities, enabling them to develop and utilize digital skills to improve their livelihoods and address challenges in their communities. This component will support vulnerable youth by enabling their participation in online and in-person digital skills training courses, thereby increasing their employment opportunities. The project will include targeted outreach and awareness-raising activities to recruit beneficiaries, including young women and youth with disabilities. Given that digital skills agenda is nascent in Sierra Leone, the design of digital literacy trainings will be based on a robust and detailed market assessment on the supply and demand of digital skills, as well as the analysis on the potential for youth to access livelihoods opportunities through the gig economy. Leveraging on Sierra Leone's progress in fostering drone use cases for development, the project will also include drone training for selected use cases and strengthening regulatory capacity for relevant regulatory bodies such as National Civil Aviation Authority (NCAA) and NATCOM. The subcomponents proposed in this component are:

- Subcomponent 2.1. Digital Skills Training
- Subcomponent 2.2. Drones for Innovation

Component 3. Laying Key Foundations for Digital Government Services and Systems (US$19.5 million)

This component aims to build the core infrastructure and institutional capacity to strengthen digital public service delivery, build prioritized services and systems, and enhance the Government's operational efficiency. This Component is comprised of three mutually integrated subcomponents, namely: Subcomponent 3.1: Enabling environment for digital government; Subcomponent 3.2: Government Service Delivery Infrastructure and Networks; and Subcomponent 3.3. Demonstration of Digital Services and Systems. The subcomponents proposed in this component are:

- Subcomponent 3.1. Enabling Environment for Digital Government
- Subcomponent 3.2. Government Service Delivery Infrastructure and Networks
- Subcomponent 3.3. Demonstration of Digital Services and Systems

Component 4: Project Management and Implementation Support (US$3.6 million)

This component will finance the Borrower's project management and coordination capacity, including procurement, financial management (FM), monitoring and evaluation (M&E), environmental and social (E&S) safeguards management, project communication, and citizen engagement. This component will also cover modest office equipment and independent audits and learning/training for key beneficiaries (e.g., Project Coordination Unit (PCU) staff and the Technical Committee) to support the public sector's ability to build and retain skills for implementing whole-of-government digital transformation. Moreover, special attention will be devoted to promoting equal participation of women in all decision-making bodies under the project and contributing to tackling barriers in recruitment, retention, and promotion.

Citizen Engagement (CE) support will be financed under this subcomponent and include: (a) the development and implementation of a comprehensive grievance redress mechanism (GRM) to collect and respond to issues encountered by beneficiaries, system users, other system stakeholders, as well as the general population, including links between the GRM and M&E systems in order to improve project monitoring data; (b) the development of a comprehensive CE strategy and national consultation mechanism to ensure that all relevant stakeholders, including beneficiaries and marginalized groups, are consulted about the project design and implementation on at least an annual basis and the feedback from those consultations is fed back into the implementation plan and design of project-financed systems; (c) qualitative user research to identify barriers to accessing and successfully using project-financed systems and services, particularly barriers faced by marginalized groups and underserved populations, and inform the design and implementation of the activities; and (d) surveying usage and satisfaction of users of project-financed systems and services.

Component 5: Contingent Emergency Response Component (CERC) (US$0.0 million)

In the context of the COVID-19 crisis, a Contingent Emergency Response Component (CERC) is added to the project structure to provide support to the Government to swiftly respond to an eligible crisis, including climate or natural disasters and public health emergencies. Including CERC at the preparation stage, albeit with zero funding, provides for flexibility for an agile response to an imminent or actual emergency (such as COVID-19) through quick disbursement of uncommitted balances from other components. The crisis response expenditures could cover, for instance, the facilitation of emergency payments to vulnerable groups of population using mobile money or ensuring business continuity of core government functions, when civil servants are required to continue home-based work. The CERC is not expected to finance civil engineering works that can induce risks and/or negative environmental and social impacts. However, CERT component is not added to finance any activities that include adverse environmental and social risks and impacts.

Approach and Methodology

The ESMF has been prepared in accordance with WB's Environmental and Social Framework (ESF) requirements and applicable Sierra Leone environmental assessment procedures. The following approach and techniques were used in the development of the ESMF:

- Data gathering through desk research;
- Participatory public consultations and discussions with relevant sector institutions including Ministries, Departments and Agencies (MDAs) private and public innovation, ecosystem providers, telecom providers, vulnerable groups and Non-Governmental Organizations (NGOs);
- Data analysis for risk-impact identification and guidelines for the preparation of subprojects Environmental and Social Management Plans (ESMPs);
- Review of comments and feedback from stakeholder consultations; and
- Finalization of the ESMF for disclosure.

Legal and Institutional Framework

The proposed SL DTP will strictly adhere to and follow the World Bank's ESF as well as the legal and regulatory frameworks of Sierra Leone on environmental and social aspects. The key environmental and social policies, legal framework and procedures considered as relevant under the SL DTP, as outlined below, have been described in Chapter 2 of this ESMF including a comparison of Sierra Leone's Regulations/ Policies and World Bank ESF for managing Environmental and Social Risks and impacts of the project.

- National Social Protection Policy (2011 and revised 2018)
- National Lands Policy, 2015/Land Tenure and Ownership
- National Environmental Policy (NEP) 2013
- Development-Induced Resettlement Policy 2020
- National Biodiversity Strategy and Action Plan 2017–2026
- National Disaster Risk Management Policy, 2018
- The National Water and Sanitation Policy, 2010
- National Policy on the Advancement of Women, 2000
- National Policy on Gender Mainstreaming, 2000
- The GBV Referral Protocol, 2019
- The Right to Access Information Act, 2013
- Public Health Ordinance, 1960
- Public Health Amendment Act, 2004
- National Action Plan for Health Security, 2018
- National Resettlement Policy, 2021

The World Bank ESF consists of ten Environmental and Social Standards (ESSs). The Bank requires that all environmental and social risks and impacts of the project be addressed as part of the environmental and social assessment conducted in accordance with ESS1. ESS2–10 sets out the obligations of the Borrower in identifying and addressing environmental and social risks and

impacts that may require particular attention. These Standards establish objectives and requirements to avoid, minimize, reduce and mitigate risks and impacts, and where significant residual impacts remain, to compensate for or offset such impacts.

The following Environmental and Social Standards (ESSs) under the Environmental and Social Framework (ESF) are considered relevant to the project. ESS1 (Assessment and Management of Environmental and Social Risks and Impacts), ESS2 (Labor and Working Conditions), ESS3 (Resource Efficiency and Pollution Prevention and Management), ESS4 (Community Health and Safety), ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement), ESS6 (Biodiversity Conservation and Sustainable Management of Living Natural Resources), ESS8 (Cultural Heritage), and ESS10 (Stakeholder Engagement and Information Disclosure).

Institutional and Implementation Arrangements

This project will be implemented by a dedicated Project Coordination Unit (PCU) under the MIC as the main implementing agency. MIC will have the overall responsibility for handling the day-to-day coordination of project activities. The PCU will be responsible for the preparation of annual work plans and budgets, fiduciary arrangements and reporting, preparation of Terms of References (ToRs) and specifications, project monitoring and reporting, as well as general stakeholder coordination. Considering the Ministry's mandate to lead Sierra Leone's digital development agenda and overall coordination among MDAs, the MIC will coordinate with relevant MDAs, key stakeholders responsible for various aspects of the project implementation and serve as communication lead for project activities and outcomes. At a minimum, the PCU will be staffed with a Project Coordinator, Deputy Project Coordinator, Monitoring and Evaluation (M&E) Specialist, Procurement Specialist, Financial Management Specialist, and Environment and Social Safeguards Specialist.
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Environmental and Social Baseline Conditions

The environmental and social baseline of Sierra Leone has been provided as part of the ESMF, focusing on the general environmental and social issues of relevance to the project to provide additional context. Generally, Sierra Leone is a tropical country with two distinct seasons and increasingly unpredictable weather conditions. Deforestation is pervasive, resulting in very dry conditions and water scarcity in many regions. The economy showed a slight rise after the Ebola Virus Outbreak and a slump again during the COVID-19 outbreak, which significantly affected delivery of government services. These trends threaten a country with the potential for an exponential rise in the population from 7 million in 2015 to 12 million in 2050. Land tenure is a major crisis in the urban centres, and a severe issue for women in rural areas. Women also suffer from persistent GBV and SEA, which compounds the problem of poor waste management and internet usage in the country.

Potential Impacts and Proposed Mitigation Measures

The potential environmental risks and impacts are associated with proposed activities resulting from the provision of Last-mile Connectivity Access for Public Institutions under subcomponent

1.2 to expand high-speed broadband connectivity for selected priority public institutions at the central and local levels in Freetown and secondary cities that currently do not have broadband access. However, no direct network construction will be financed under this component, though it will incentivize the private sector network investment if deemed necessary. These investments may include laying fiber cables, replacement of microwave links etc. The specific locations and target institutions to be connected is unknown and will be determined by the feasibility study being conducted under the Project Preparation Advance (PPA). The implementation of the proposed project may result in several potential E&S impacts on the biophysical, socio-economic, and cultural environments. These potential E&S impacts could be both positive and negative, and will occur during the construction and operation & maintenance phases. The overall environmental and social risks are currently assessed as Moderate as project interventions are not anticipated to have adverse irreversible impacts. However, good E&S risk management practices will minimise or eliminate most of the anticipated risks and impacts, which are mostly temporary and site specific. These risks and impacts are expected to range from minimal to moderate, due to the nature of small to medium scale infrastructure works. The key potential environmental risks and impacts associated with the proposed activities both during the construction and operational phases under the Project, include

Adverse Environmental Risks and Impacts

- nuisance related to air and noise emissions from moving vehicles, excavators, generators, power tools (e.g., for vegetation clearing), and compressors during construction. Vibrations may come from soil compaction equipment and other vibro equipment to be used
- Air pollution is expected from fugitive dust and emissions from construction vehicles, plant, and equipment. Dust is generated by excavation and earth moving operations and causes nuisance to residents and other sensitive receptors. Exhaust emissions occur from poor maintenance of plant and equipment or over revving of engines
- Low to moderate risk on biodiversity
- Disposal and management of waste from soil excavation and operation of machinery.
- Solid waste generated during construction including domestic waste from construction areas and worker camps.
- Community health and safety risks.
- Traffic management.
- Occupational health and safety of workers during construction.
- Operational and maintenance activities envisioned may also result in the generation of electronic wastes (e.g., old cell phones, nickel cadmium batteries and printed circuit boards from computers and other electronic equipment as well as backup power batteries).
- The operation of backup generators and service vehicles may also result in the generation of used tires, waste oils and used filters.
- Operations and Maintenance (O&M) risks may also result from the poor handling of electronic wastes, such as spent circuit boards, transformers, capacitors, transistors, and hazardous wastes including, nickel, lead or cadmium batteries, and old/broken cables

Potential Adverse Social Risks and Impacts

- Exclusion of vulnerable groups (women, and persons with disabilities and people in hard-to-reach communities) from accessing digital services and project benefits.

- Risk of land acquisition and displacement resulting from installation of IT equipment and civil works to support last mile connectivity for selected priority public institutions, including government offices, schools, health clinics and community centers.
- Labor related risks, health, and safety of workers and exposure to COVID-19 from the engagement of consultants to carry out the capacity building trainings and contractors.
- Risk of Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) from the process of registering beneficiaries for digital training where project actors with power over the registration process could exploit vulnerable beneficiaries. Similarly, project actors and trainers may engage directly with beneficiaries in conducting the training with limited supervision, SEA/SH can also occur. Investment for last mile connectivity will likely be implemented in poor communities with increased income from construction/rehabilitation work, coupled with search for employment and procurement opportunities, the risk of SEA/SH may be heightened

Impact mitigation measures proffered in this report are general guidelines for dealing with the envisaged program and sub-project impacts. The recommended mitigation measures are those that have been considered appropriate and practical and the following principles have been taken into consideration.

Environmental and Social Impact Assessment (ESIA)/Environmental and Social Management Plan (ESMP)

An Environmental and Social Management Plan (ESMP) shall be prepared for subcomponents 1.2 and 3.2 during the subproject preparation stage. The ESMPs are required to provide how environmental and social issues of the subprojects will be addressed during project pre-construction, construction operational and operational phases. The ESMPs will specify standards and codes of practice as well as all the operational plans proposed for each subproject to ensure environmental sustainability and social acceptability.

The ESMP provides details on: (a) the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts, or to reduce them to acceptable levels; and (b) the actions needed to implement these measures. It consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a project to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels. The ESMP also includes the measures and actions needed to implement these measures. Roles and responsibilities are clearly defined to guide project implementation with recommended monitoring measures. These are specific actions recommended to address the potential impacts identified for project: to reduce, avoid mitigate and or compensate the negative social and environmental impacts identified in the impact assessment of a project proposed activities.

ESMF Implementation Monitoring Plan

The purpose of the Implementation Monitoring Plan includes (i) to ensure proper and timely implementation of environmental and social interventions proposed in this ESMF and other relevant documents preparation based on the ESMF such as the EIA/ ESIA and EMP/ ESMP; (ii) to alert project authorities by providing timely information about the success or otherwise of the

environmental management process outlined in this ESMF; and (iii) to make a final evaluation in order to determine whether the mitigation measures incorporated in the technical designs and the EMP/ ESMP have been successful or not and to determine what further mitigation measures may be required. The plan is made of two types of monitoring, namely: Compliance Monitoring and Monitoring of Environmental and Social Impacts. These roles will be performed by the PCU who lead on compliance monitoring, contractors who apply measures proposed herein to field activities, and the EPA who monitor sites and evaluate reports from time to time. The MIC will work with the EPA, Ministry of Lands and Country Planning, Ministry of Gender and Children's Affairs, agencies specified under the components and subcomponents of the project, digital service providers, local councils, contractors, and consultants to implement the ESMF.

Capacity Building and Training Requirements

Project institutions need to understand the purpose of the ESMF, their expected roles and the extent to which the ESMF will facilitate the respective statutory functions. This will engender the required collaboration for the ESMF implementation. 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:

- Stakeholder engagement and project awareness raising
- World Bank ESF
- Project GRM
- Emergency preparedness and response
- Community health and safety
- Implementation of ESMF, RPF, SEP
- E&S screening for sub-projects
- Environmental and Social Risk Management procedures
- COVID 19 transmission, prevention, preparedness and response
- Occupational Health and Safety
- SEA/SH Risk Mitigation
- Disability inclusion training
- E&S Documentation and reporting
- Information disclosure

Further details are presented in Chapter 10 of this document.

Grievance Redress Mechanism (GRM)

The main objective of a Grievance Redress Mechanism (GRM) is to assist the implementing institutions to resolve complaints and grievances in a timely, effective, and efficient manner that satisfies all parties involved. It is to help track project-related complaints including a feedback system for regular and timely response on actions taken to respond to complaints and to address and resolve any issues or problems connected to the proposed project from affected persons or community members promptly and in a manner that will be acceptable to all parties. The GRM is an integral part of this ESMF and helps to create avenues for receiving and responding to stakeholder concerns and complaints about issues related to the project. Specifically, it provides a transparent and credible process for fair, effective and lasting outcomes. It also builds trust and cooperation as an integral component of broader community/ citizen engagement that facilitates corrective actions.

Grievances arising from the proposed project implementation could typically include access and quality of services, issues about targeting for services, and availability of facilities and resources. Grievances may also relate to expansion of infrastructural activities with some physical footprints in the later stages of project implementation. The GRM are in four levels, i.e., Level 1 will be to (i) receive, (ii) acknowledge, (iii) register/ log, (iv) screen, (v) Investigate, (vi) resolve and (vii) provide feedback on grievance at the project institutions implementing the project; Level 2 will be to present the grievances to a Grievance Redress Committee (GRC) at the PCU/ MIC; Level 3 will be to use a Mediation to be agreed by the complainant and PCU/ MIC and the last resort being the use of Court (Level 4). In line with ESS2 and ESS5, the project's GRM shall be utilized with its approach to addressing grievances. SL DTP has established a comprehensive Grievance Redress Mechanism for management of all kinds of grievances including labour issues under ESS 2 and resettlement under ESS 5. It also addresses grievances related to Sexual Exploitation, Abuse, and Harassment (SEA/H) related action plan will mitigate SEA/ H risks inclusive of referral pathways for rehabilitation of victims.

Public Consultations, Participation, and Information Disclosure

Key stakeholders including organisations and individuals have been consulted in May 20 to June 3, 2022 and the objectives of the engagement were to:

i. Provide information related to the activities of the proposed project;
ii. Facilitate and maintain dialogue;
iii. Seek participation of all interested parties;
iv. Identify key stakeholder interests as well as issues;
v. Create solutions for addressing any concerns and integrating them into project design, operations, and management; and
vi. Enhance the project by learning from, and incorporating the expertise of individuals, professionals, communities, and organizations.

Aspects of the stakeholder concerns are summarized in Appendix 12-1. To ensure proper implementation of the project and to avoid public agitations/ litigations which could hinder the project, the project should further engage/sensitize the public, particularly those who may be affected within the RoW and sites for project facilities. The engagement/sensitization should include the schedule of implementation, reinstatement process for any affected property, grievance redress mechanism, traffic management, etc. The public engagement/ sensitization should be carried out ahead of any civil works and any grievances addressed.

Key findings from stakeholder interviews held to assess the current situation with the core project components and subcomponents are presented as follows.

- On broadband market policy and regulations, NATCOM noted the development of various policies since 2020, including for SIM registration, license regulation, type approval, and radio frequency regulation. They noted the need for the project to support the establishment of a network monitoring system, quality-of-service assessments, improvements to the available Spectrum Vehicle, and implementation of findings of both the cost study and access gap survey.
- For last mile connections and enhancing inclusive access, UADF stressed the urgent need for infrastructure and the digital services that accompany it, to scale-up the ongoing pilot in three regions, funded from the 0.75% levy received recently from MNOs.

- In terms of e-waste management, EPA indicated that the current EPA acts are inadequate for regulating e-waste and no policy has been developed, although previous work done by the FCDO through the Africa Clean Energy Technical Assistance Facility (ACE TAF) provide an approach for developing such policies. This project will support the preparation of e-waste management plan during project preparation along with the development of the e-waste management policy frame work under subcomponent 1.1.
- On digital skills development and innovation, NATCOM stressed the importance of strengthening the capacities of their staff and ISPs on the back of needs and resources identified by the access gap survey. This work could be complemented by the Africa Finance Corporation (AFC) that is in talks with the commission.
- MTHE noted the slow but sure transition to digital systems for curriculum development and delivery at institutions of higher learning, although ICT laboratories are needed to provide hands-on training to learners are roll-out other plans in their 5-year strategy.
  In terms of e-government service delivery infrastructure and networks, the Cabinet Secretariat indicated that a Cabinet Manual was produced in 2015 to go with the establishment of a web-based platform that, however, still needs additional infrastructure to be sustainable and secure. The goal in the future is to open the platform to the public, create a library site, and provide tools for performance monitoring.

The major concerns and expectations expressed by the stakeholders are as shown in Table 1.

Table 1: Major concerns and expectations expressed by stakeholders

CONCERNS & EXPECTATIONS	RESPONSES TO STAKEHOLDERS' CONCERNS
• Project to improve the utility of the Integrated Financial Management System (IFMS) and Integrated Tax Administration System (ITAS) • Low digital skills within the public sector; need to develop and/or strengthen skills for the delivery of digital services within and outside the civil and public services • Need to support the delivery of Digital Finance Services (DFS) and government's financial inclusion agenda • Need to digitalize civil registration • Need to increase digital literacy among teachers, lecturers, students, and pupils • Need for adequate and appropriate policies to regulate the broadband market and create opportunities for last mile inclusive access. • Need to purchase and install Assisstive Technology to enhance PwD access to	The sections dealing with some, or all the concerns expressed by stakeholders have been updated considering recent developments in the sector. The final project document will reflect all needs and aspirations of relevance to the goal and objectives of the project.

digital content and increase their participation in the digital space. • Need to consider barriers to sustainability (e.g., energy access for establishing and operating ICT labs, ready supply chain for digital services capacity building, etc.) • Need for the project to support the establishment of a network monitoring system, quality-of-service assessments, improvements to the available Spectrum Vehicle, and implementation of findings of both the cost study and access gap survey. • Need for infrastructure and the digital services that accompany it, to scale-up the ongoing pilot in three regions, funded from the 0.75% levy received recently from MNOs. • Need for an e-waste management plan	

Institutional Arrangements for ESMF Implementation

The MIC will work with the EPA, Ministry of Lands and Country Planning, Ministry of Gender and Children's Affairs, agencies specified under the components and subcomponents of the project, digital service providers, local councils, contractors, and consultants to implement the ESMF. The PCU at MIC will be responsible for overall coordination of activities through its Environmental and Social Specialist. The relevant ministries in government will lead efforts to address any resettlement and GBV/SEA issues where likely, digital service providers will work through contractors to ensure full implementation of and compliance with measures proposed in the ESMP, and consultants will mainly lead capacity building and coordinate or lead reporting.

ESMF Implementation Budget

Budgetary estimates have been provided to support the implementation of the ESMF regarding these key activities: (i) Awareness creation on Project; (ii) ESMF Disclosure; (iii) Capacity building activities for the PCU and other key stakeholders; (iv) Public engagement/ sensitization; (v) Engagement of Environmental and Social Safeguards Specialist for the project; (vi) ESMF Project Management; and (vii) Monitoring and evaluation activities of the PCU. The estimated budget for the implementation measures under the ESMF is **US$ 155,000** (equivalent to SLL 2,015,000,000).

Disclosure

This ESMF has been prepared in consultation with the PCU/MIC, relevant agencies, and the Bank. The ESMF will be disclosed publicly at the MIC Office and on the World Bank external website. Site specific ESIAs/ESMPs will be prepared by the Client for each subproject based on the guidelines and procedures highlighted in this ESMF and would be disclosed accordingly.

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List of Abbreviations

CERC	Contingent Emergency Response Component
EHS	Environmental, Health, and Safety
EPA	Environmental Protection Agency
ESA	Environmental and Social Assessment
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
GBV	Gender-Based Violence
ICT	Information Communication Technology
LMP	Labour Management Procedures
MDA	Municipal and District Assemblies
MIC	Ministry of Information and Communication
NCPD	National Union of Persons with Disability
PAPs	Project Affected Persons
PCU	Project Coordination Unit
PDO	Project Development Objective
PDP	Project Development Objective
PCU	Project Coordination Unit
POC	Project Oversight Committee
PPME	Policy, Planning and M&E
PPP	Public-Private Partnerships
PwDs	Persons with Disabilities
PWDs	Persons with Disabilities
RAP	Resettlement Action Plan
RoW	Right of Way
RP	Resettlement Plan
RPF	Resettlement Policy Framework
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SIP	Single Information Portal
SLA	Service Level Agreement
SMEs	Small and Medium Enterprises
SMS	Short Message Service
TA	Technical Assistance
TLAs	Technical Lead Agencies
UNDP	United Nations Development Programme
WB	World Bank
WBG	World Bank Group
WDR	World Development Report

1. INTRODUCTION

1.1. Project Background

Sierra Leone is a small country in West Africa with a total population of 7.9 million, of which approximately 75 percent are under 35 years. The country is known for its rich minerals, agricultural and blue resources. However, Sierra Leone faces multiple development challenges, including poverty, a rapid growth of youth population and high youth unemployment, weak institutions, and a North-South ethno-regional divide. About 40 percent of the total population lives under the poverty line (US$1.9 per day), and per capita GDP at US$400 remains almost the same level as it was after independence in 1961. Sierra Leone is ranked nearly at the bottom of most development metrics and has the fifth lowest life expectancy globally (54 years). Sierra Leonne's economy remains highly dependent on agriculture and natural resources for revenue as it struggles to expand its labour market, increase its productivity, and job creations for its youth population. The youth bulge is therefore associated, in part, with low skills and frustration around unmet expectations, an important source of fragility. Similarly, with the occurrence of the COVID-19 Pandemic, youth education and skills development has been particularly challenging due to the closure of educational establishments and limited or no access to on-line educational resources.

There are many great opportunities in integrating digital technologies to drive the transformation of a country's economy towards prosperity. It is no surprise that the Government of Sierra Leone (GoSL) is committed to transforming its economy based on a more inclusive and human-centric digital growth and development approach. However, constraints to advancing digital transformation remain significant in Sierra Leone. The Digital Economy for Africa (DE4A) Country Diagnostic conducted for Sierra Leone in 2020 highlighted the challenges that Sierra Leone faces in achieving its vision, including high prices of connectivity and devices, significant gaps in access to broadband internet for rural, women and marginalized groups, inadequate capacity, and skills to capitalize on digital opportunities, poor security of critical infrastructure, and low awareness of cybersecurity threats. The result of the combined impact of these challenges is the low adoption of digital technologies—only 35 percent of population were subscribed to mobile broadband services in 2021—and there is a risk of many Sierra Leoneans being left behind.

Sierra Leone is known to be one of the first countries in West Africa to commit to improving the geographical reach of high-speed connectivity for its citizens through direct access to a submarine fibre optic cable, Africa Coast to Europe (ACE), which benefitted from World Bank Group financing. Additional commitments to robust national backbone and access networks to ensure a universal and affordable connectivity to all citizens included investments in a 660 km terrestrial fibre-optic backbone link from Freetown to the Liberia and Guinean borders, with fibre points of presence (PoPs) in 28 out of a total of 46 cities across the country. Improved international connectivity has resulted in increased access to internet connectivity for Sierra Leonians: 84 percent and 75 percent of the population in Sierra Leone are covered by 3G and 4G signals, respectively, as of Q4 2021. However, the ACE submarine cable is currently controlled by the state-owned operator, Sierra Leone Cable Limited (SALCAB), as a de facto monopoly: while SALCAB is allegedly working with a private sector firm to operate and manage the submarine cable, the operational efficiency remains questionable. In addition, Sierra Leone is connected to only one submarine cable landing station (ACE cable) serving as a single internet gateway, making the entire broadband value chain vulnerable and susceptible to natural hazards and physical

shocks. Despite the progress made in the expanded access to internet, the lack of affordability in handsets and barriers around digital skills and literacy are preventing the ubiquitous use of broadband internet in Sierra Leone. These demand-side barriers are further prohibiting Sierra Leone from advancing to a more inclusive digital society, a vision the GoSL set to achieve.

Additionally, there is strong digital divide between urban and rural areas. The ownership of mobile phones is correlated to the household's location. People in a larger town have a higher rate of mobile phone ownership. However, smart devices (3G/4G) are still not affordable for most people in Sierra Leone. There is also a significant gap in last-mile access networks necessary to connect end-users to access the broadband internet networks in rural and remote areas where the commercial profitability of private sector investment is deemed low. The urban-rural access gap is also affected by the limited availability of electricity with the national electrification rate around 30 percent, which tends to be lower in rural areas. Moreover, public institutions across the country and local councils are still lacking last-mile network coverage and access disrupting efficient government operation and communication with its constituencies. Sierra Leone's efforts at digitalizing public sector systems and government services have been unsuccessful due to a siloed approach.

Furthermore, Sierra Leone's capacity to build cyber resilience and respond to cyber threats has not developed at the pace of its will and vision. Sierra Leone ranked 121st out of 182 countries assessed in the 2020 ITU Global Cybersecurity Index, and 22nd out of 43 countries assessed in the Africa Region, lagging behind its peers in West Africa such as Ghana (2nd in the Africa region) and Cote d'Ivoire (11th) yet higher than other neighbouring countries such as Guinea (25th) and Liberia (37th). While Sierra Leone scored relatively high in measuring national strategies and organizations implementing cybersecurity (8.16 out of total 20), it scored the most poorly performed in the capacity development measuring awareness campaigns, training, education, and incentives for cybersecurity capacity development. The GoSL has laid the policy, legal and institutional foundations necessary for recognizing the importance of cybersecurity across its economy and critical infrastructure; for example, the National Cybersecurity Policy was adopted, the Cybersecurity and Cybercrime Law was enacted on November 17, 2021, and the Data Protection Bill is currently underway for approval by the Cabinet. In particular, the enacted Cybersecurity and Cybercrime Law includes important provisions for creating National Cybersecurity Coordination Centre (NCCC) to house National Computer Incident Response Team (N-CIRT) and protecting Critical Information Infrastructure (CII) from cybersecurity risks. It is therefore crucial for the GoSL to operationalize new and existing institutions that will be responsible for monitoring and responding to cyber threats in a timely manner and continue to create an environment for the private sector to play a role hands-in-hands with the public sector, thereby building cyber resilience across various fabrics of its economy.

Sierra Leone is currently missing key enablers that can materialize the value of open data through the practice of sharing and reuse. World Development Report (WDR) 2021: Data for Better Lives attests those open data policies must be supported by a consistent protocol for classifying sensitive data with interoperable technical standards, machine readable formats, and open licensing to facilitate subsequent reuse of data to realize the impact of open data. Moreover, data analytics and processing play a crucial role in enabling data to foster development for all stakeholders in the data ecosystem. While the development of Open Data Policy is underway in Sierra Leone, there are no

frameworks in place to support the policy with the necessary procedures to enable the potential of open data.

Although Sierra Leone is faced with these challenges, there is a significant potential for digital technologies and digitally enabled innovation to contribute to increasing overall socioeconomic resilience in the country especially in the context of growing climate change risks and extreme weather events.

In response to these issues, the Sierra Leone Digital Transformation Project (SLDTP) is proposed to enhance conditions for private sector development with quality job growth. It is in these regard that the GoSL is receiving WB support in the sum of Fifty Million United States Dollars (US$50,000,000.00) for the Sierra Leone Digital Transformation Project (SLDTP) to streamline and enhance the opportunities in the digital space. Details of the project interventions are described below.

It is expected that, the project interventions will generate Moderate Environmental and Social Impacts. This Environmental and Social Framework is prepared to assist the MIC in developing environmental and social (E&S) instruments in response to SLDTP following national regulations and the World Bank's Environmental and Social Framework (ESF). This ESMF includes templates for Environmental and Social Screening, generic Environmental and Social Management Plan (ESMP) and Chance Find Procedure. Other E&S instruments as required by the ESF, such as Stakeholder Engagement Plan (SEP), Labor Management Procedure (LMP), Resettlement Policy Framework (RPF), and GBV Action Plan. The proposed timing of development and implementation of these documents are defined in the project Environmental and Social Commitment Plan (ESCP).

1.2. Project Description

The proposed Sierra Leone Digital Transformation Project (SL DTP) aims to increase digital adoption and digital literacy, improve e-government services, broadband market policy and regulation as well as fostering environment for mainstreaming digital solutions. The proposed project has complementarity with the following active and pipeline operations including but not limited to: (i) Sierra Leone Financial Inclusion Project (P166601); (ii) Accountable Governance for Basic Service Delivery (P172492); (iii) Sierra Leone Economic Diversification Project (P164212); (iv) Resilient Urban Sierra Leone Project (P168608); (v) Sierra Leone Free Education Project (P167897); and (vi) Sierra Leone – Quality Essential Health Services and Systems Support Project (P172102).

Project Development Objective

To expand access to broadband internet, increase digital skills improve government capacity to deliver public services digitally.

The achievement of the Project Development Objective (PDO) will be measured by the following results indicators:

Expand Access to Broadband Internet

a) People provided with new or enhanced access to broadband internet, of which percentage rural;

Increase Digital Skills

a) Number of beneficiaries trained in digital skills programs reporting new employment or education opportunities, of which percentage female, of which percentage Persons with Disabilities (PWDs)

Improve government capacity to deliver public services digitally

a) Number of Government Ministries, Departments and Agencies (MDAs) benefitting from new or improved access to broadband;
b) Number of Ministries, Departments and Agencies (MDAs) utilizing shared services operationalized by the project

Project Components

The Sierra Leone Digital Transformation Project proposes four integrated and mutually reinforcing components, with a fifth component dedicated to contingent response to future emergencies (Contingent Emergency Response Component, CERC). **Table 1-1** summarizes the component structure.

Table 1-1: Summary of Components and Proposed Costs

Components	**US$ million**
Component 1. Expanding Digital Access and Increasing Resilience of the Digital Environment	21.3
Subcomponent 1.1. Broadband Market Policy and Regulation	3.8
Subcomponent 1.2. Last-mile Connectivity Access for Public Institutions	9.2
Subcomponent 1.3. Inclusive Access for Underserved and Marginalized Communities	3.8
Subcomponent 1.4. Increasing Resilience of the Digital Environment	4.5
Component 2. Digital Skills Development and Innovation	5.3
Subcomponent 2.1. Digital Skills Training	4.0
Subcomponent 2.2. Drones for Innovation	1.3
Component 3. Laying Key Foundations for Digital Government Services and Systems	19.8
Subcomponent 3.1. An Enabling Environment for Digital Government	3.6
Subcomponent 3.2. Government Networks and Service Delivery Infrastructure	10.1
Subcomponent 3.3. Demonstration of Digital Services and Systems	6.1
Component 4. Project Management and Implementation Support	3.6
Component 5. Contingent Emergency Response Component (CERC)	0.0
TOTAL	**50.0**

Source: WB's Project Appraisal Document (PAD)

Component 1: Expanding Digital Access and Increasing Resilience of the Digital Environment (US$21.6 million)

This component aims to improve broadband market efficiencies and competition, expand access to broadband internet, and foster inclusive digital connectivity by addressing existing digital divides in Sierra Leone. Sierra Leone continues to experience challenges in strategic parts of the broadband value chain, from the first mile where the internet enters the country to the last mile where it reaches end users. A mix of financing and technical assistance is expected to strengthen regulatory capacity and instruments to increase market competition, attract private sector investment, lower internet prices, and address some key connectivity gaps in Sierra Leone.

Subcomponent 1.1. Broadband Market Policy and Regulation (US$3.8 million)

This subcomponent will strengthen upstream policy and regulatory environment in the broadband value chain in line with a Maximizing Finance for Development (MFD) approach.

International Connectivity. The project will support the government in developing a strategic approach to addressing the potential risk of having a single submarine cable-landing station, as well as to better leverage the existing international gateway for improved efficiency of the broadband market in Sierra Leone. TA will be provided to support the sector regulator in (i) developing a business case and policy instruments to facilitate increased network redundancy; (ii) providing measures to address the climate vulnerabilities of the submarine landing cable with the aim of increasing the overall climate resilience of digital infrastructure; and (iii) supporting the operationalization of a Sierra Leone Internet Exchange Point (SLIX), including an assessment of internet traffic, identification of a business model, and development of operational guidelines. In order to establish a sustainable IXP after several unsuccessful past attempts, it is agreed that this activity will take a joint industry approach with private sector operators and aim to nurture trust between the government and such operators. Based on the findings of the feasibility study, the project will finance the purchase of equipment for SLIX in collaboration with the private sector.

Broadband Market. This activity will support review and reforms of policy and legal frameworks, such as infrastructure sharing policy, to create an enabling environment for improved competition and economies-of-scale infrastructure deployment that will lead to affordable access to broadband services. Also, this subcomponent will provide TA to the government to conduct an institutional gap assessment of NCA, the new regulatory authority which will emerge from the government's institutional reform. The project will provide capacity development support to NCA based on the findings of the gap assessment. In the meantime, the subcomponent will support the existing sector regulator's efforts to address challenges related to competition and the high price of telecommunication services through the following activities: (i) TA to draft SMP legislation; clear interconnection regulations; and tariff/cost studies to ensure fair pricing to boost market competition and increase the affordability of broadband services; and (ii) the purchase of equipment and development of regulatory capacity for efficient spectrum and network monitoring and management.

Subcomponent 1.2. Last-mile Connectivity Access for Public Institutions (US$9.2 million)

This subcomponent will provide last-mile connectivity access to the selected public institutions at the central and local levels in Freetown and secondary cities that currently do not have broadband access. Access to reliable broadband internet in priority government offices and public institutions is a critical stepping-stone to improving coordination and management among MDAs. The connectivity support will enhance wider adoption of public financial management systems and platforms, as well as improved government-wide communication and response in national emergencies. The approach being applied for last-mile connectivity under the project is demand aggregation and pre-purchase of capacity for the government through "Indefeasible Rights of Use" (IRU) for 3-5 years[1]. This approach ensures value for money, through competitively tendered contracts with the private sector that guarantee medium- to long-term supply agreements with the government, which is enabling MFD. The specific locations and target number of institutions will be determined based on the findings of the Public-Private Infrastructure Advisory Facility (PPIAF)-funded comprehensive mapping exercise. The PPIAF study will first assess the status of supply and demand of the existing and planned investments in digital infrastructure by both the private and public sectors, follow with a technical feasibility study to validate configuration of selected locations. The list of public institutions will also reflect the priority sites identified in close collaboration with various MDAs, as well as other ongoing WB-funded projects to maximize synergies and development impacts.

Subcomponent 1.3. Inclusive Access for Underserved and Marginalized Communities (US$3.8 million)

This subcomponent will address the access gap in rural and remote areas, and will support digital access inclusion, especially for women and PWDs. While the project primarily focuses on improving access to broadband connectivity in urban and peri-urban areas, where access to electricity is generally available, this subcomponent will support the government's innovative approaches, elaborated below, to promoting inclusive access to broadband for underserved and marginalized communities.

Rural Connectivity Access. Key activities to support the government in developing an approach for expanding access to broadband internet in selected rural areas that the private sector is unlikely to cover for reasons of non-profitability will include: (i) provisioning of financing of least-cost subsidy reverse auctions ("Subsidy Payments") to eligible private sector providers ("Service Providers") for deployment of shared infrastructure and mobile broadband services (3G/4G) in selected rural and remote areas ("Rural Mobile Broadband Program"); (ii) partnership with the private sector, NATCOM, UADF, and academia to pilot and scale-up innovative technologies, such as satellite, and business models for rural broadband deployment. The objective of these pilots is to develop a proof of concept for an MFD approach that could inform subsequent possible scaling up to narrow the urban-rural network coverage gap.

[1] Any operations and maintenance costs that go beyond the closing date of the Project as well as additional bandwidth purchase after the closing date would fall under the responsibility of the GoSL.

Assistive Technology (AT) Digital Equipment. The project will also finance the purchase of AT digital equipment that can enable access to digital technologies and broadband internet for selected organizations for persons with disabilities (OPDs).

Subcomponent 1.4. Increasing Resilience of Digital Environment (US$4.5 million)

This Subcomponent aims to increase the overall resilience of digital environment by enhancing cybersecurity and climate resilience, and effectively managing electronic waste (e-waste).

Cyber Resilience. Addressing growing and evolving cyber risks and threats are key to ensuring a safe, secure, and cyber-resilient digital transformation in Sierra Leone. The activities elaborated below are designed based on the cyber-threat landscape in Sierra Leone and the identified objectives and critical paths outlined in the government's National Cybersecurity Strategy 2021-25.

Critical Information Infrastructure Protection (CIIP). The project will support the operationalization of CIIP through the following activities: (i) TA to identify sectors and systems to be considered as the critical information infrastructure (CII) by establishing a set of defining criteria, and the development of a nationwide CIIP Plan Directive, which will define the criteria for assigning and designating CIIs and will set out the processes, requirements, and specific standards for CII sectors/systems to consider when devising sector-specific CIIP plans; (ii) a review of the legal and regulatory frameworks necessary for implementing the CIIP Plan; and (iii) the development of sector/system-specific CIIP plans for the priority sectors (for example, financial services, government, telecommunications, energy, and/or aviation). Once the CII is defined and identified under the TA, the project will finance the development of risk registries and standard operating procedures (SOPs) for the selected priority CII.

National Cybersecurity Coordination Center (NCCC) and National Computer Incident Response Team (N-CIRT). The project will also support the operationalization of the NCCC, which will be housed the Sierra Leone N-CIRT. Support will include the purchase and installation of key operational infrastructure, such as a threat intelligence monitoring and management system; an incident management platform; a contact center platform; an information-sharing platform; and other software licenses for NCCC that will be financed by the project. For the N-CIRT, the purchase of necessary hardware equipment and software licenses will be supported for the project duration, and the project will seek sustainability of the N-CIRT operation beyond the project cycle. For sustainable operationalization of NCCC and N-CIRT, the project will support the development of critical paths and a road map. This component will also finance training and capacity-building activities, particularly for N-CIRT and civil servants working in the relevant domains of cybersecurity across the government.

Cybersecurity Skills and Online Safety Awareness. The project will support developing Sierra Leone's cyber expertise and skills capacity and enhancing the country's day-to-day cybersecurity and online safety awareness and behavior. Key activities include:

i. ***Upstream TA to support the development of National Strategy and Action Plan on Cybersecurity Skills and Cyber Awareness.*** The strategy will be an anchoring document in which to outline the government's vision for nurturing cybersecurity skills

development and fostering a cyber-safe culture in order to enable a resilient environment for digital transformation. The Cybersecurity Skills section of the strategy will lay out the government's vision for creating a vibrant cybersecurity skills development and training ecosystem that can be woven into both informal training opportunities and formal education curricula. The Cyber Awareness section of the Strategy and the Action Plan will lay out the government's vision for increasing public cybersecurity awareness and facilitating basic "cyber hygiene" practices among individuals, businesses, and communities in Sierra Leone. Both the Strategy and the Action Plan will incorporate the principles of inclusion in order to unleash opportunities for marginalized communities, particularly women, people in remote/rural areas, and PWDs. The TA will support the implementation of selected activities from the action plan.

ii. ***Implementation of the Strategy and Action Plan.*** The project will support implementation of selected activities from the action plan, such as a launch of public cyber awareness campaign for the population of Freetown and other major cities in Sierra Leone. The campaign will increase online safety, including through paying particular attention on child online protection and online sexual harassment.

Cybersecurity Maturity Model (CMM) Assessment. The first round of CMM was assessed in 2016 by the support from the United Kingdom Government with partnership of ITU. The project will support for the next round of the CMM assessment to identify progress made, and propose the next action plan.

Climate Resilience. This activity will finance to enable data-driven climate adaptation measures at various stages of the climate early-warning communication value chain, focusing on early warning system (EWS) communication infrastructure deployment, early warning information generation, and last-mile information dissemination. The activity will strengthen digital communication systems across the climate information value chain underlying Emergency Operations Center (EOC). It will be housed within the National Disaster Management Agency (NDMA) to facilitate the EWS for reliable information delivery and communication with other government offices, local councils, and citizens. For the back-end communication system for EWS, the project will finance the purchase of servers, data storage, and back-up and recovery systems to operationalize the EWS to facilitate seamless data exchange with subnational, national, regional, and international partners, and to ensure secure data management practices. For climate early warning information generation, the project will finance multistakeholder-based capacity development workshops for government offices, Mobile Network Operators, and nongovernmental organizations (NGOs) to adopt the Common Alerting Protocol (CAP) standard. And for effective last-mile information dissemination, the project will finance the inclusion of weather information as one of the services to be available under the Government Service Platform (GSP). Weather information from the meteorological system will be interfaced with the GSP and formatted to be available as user-friendly messages sent to citizens through text messages (for example, Unstructured Supplementary Service Data (USSD)), voice-based services (such as Interactive Voice Response (IVR)), and mobile and Web-based interfaces like WhatsApp and Facebook Messenger.

E-Waste Management: In line with the government's commitment under the ITU Connect 2030 agenda to reduce the volume of e-waste by 50 percent and improve e-waste policy and legislation,

dialogue for an e-waste management policy in Sierra Leone has begun, however, it is still in a draft stage in the Sierra Leone Environmental Protection Agency (EPA). The project will finance quantitative and qualitative baseline surveys to assess the footprint of e-waste in Sierra Leone and support finalization of the e-waste management policy. The policy framework will also include the development of an e-waste reduce, recycle, and reuse (3R) strategy to address the full life cycle of electronic devices and equipment, thereby building a complete circular system. After the development of the policy framework, the project will support the implementation of the policy to ensure the collection and disposal, recycle and reuse of e-waste at the community-level through the partnership with local entrepreneurs and the private sector to encourage e-waste innovation

Component 2. Digital Skills Development and Innovation (US$5.3 million)

This component aims to tackle Sierra Leone's digital literacy gap by offering digital skills training for youth aged 15 to 35 years old, enabling them to develop and use digital skills to improve their livelihoods. Given that the digital skills agenda is nascent in Sierra Leone, the design of digital literacy trainings will be based on a robust market assessment of the country's supply of and demand for digital skills, as well as an analysis of the potential for youth to access livelihood opportunities through the gig economy. Leveraging Sierra Leone's progress in fostering innovative drone use for development, the project will also include training to enhance the government's plan to expand drone ecosystem and strengthen the regulatory capacity for relevant regulatory bodies such as the National Civil Aviation Authority (NCAA) and NATCOM to improve the enabling environment for drone use in delivery of strategic services.

Subcomponent 2.1. Digital Skills Training (US$4.0 million)

Comprehensive market study to assess the supply and demand of digital skills. The project will finance TA to conduct a market study to assess available skills in the target areas; determine in-demand skills; identify bottlenecks in the digital jobs value chain; and inform the design of an appropriate demand-driven training curriculum targeting youth who are outside of the formal education system. This activity will also include a detailed assessment of the local digital ecosystem to determine the capacity of key stakeholders to deliver basic, intermediate, and advanced digital skills training to youth beneficiaries.

Feasibility assessment for the potential of the gig economy to provide youth with access to new and/or supplemental income opportunities. The project will finance TA to assess barriers affecting the digitization of traditional and non-traditional jobs, and to identify potential entry points for public sector, private sector, and community organizations to accelerate job digitization through "gig work" platforms. The study will also assess the market for on-demand service platforms that enable traditional workers and informal workers to market their services and connect directly to customers, and will also explore the potential of community-based initiatives that build digital skills and generate supplemental income. Additionally, as Sierra Leone continues its COVID-19 response and recovery, the assessment will determine the feasibility of making online jobs available through a public sector-led digital platform. Findings will inform the digital literacy training scheme and innovation activities linking youth with employment opportunities.

Digital Literacy Training Scheme targeting youth outside of the formal education system, with a focus on young women and PWDs. The project will finance training schemes that

combine face-to-face and remote learning to provide basic, intermediate, and advanced-level training to youth beneficiaries. The curriculum will be informed by the Digital Skills Market Study and the Gig Economy Feasibility Assessment described above, and will also emphasize the development of complementary socioemotional and professional skills. As young women face several barriers to access digital skills training, including restrictive gender norms, mobility and time restrictions, and less disposable income, the training scheme will incorporate strategies for maximizing their recruitment, retention, and livelihood outcomes. Local trainers will be recruited to participate in a Train-the-Trainers program, helping to ensure that the training content is relevant and contextualized. The project will collaborate with global private-sector companies to finance IT equipment, software applications, and ATs at training locations, and provide certification of skill attainment. Following a "funnel approach," the training scheme will include a digital jobs pilot that will connect beneficiaries with intermediate- and advanced-level skills with employment and mentorship opportunities.

Innovation Series consisting of events for youth beneficiaries—including young women and youth with disabilities—to leverage digital skills to address development challenges in their communities. This program will support the growth of the digital ecosystem by financing a series of workshops, bootcamps, "hackathons," and other events in partnership with local innovation hubs. These events may leverage open data generated from government digitization activities under this operation. The Innovation Series will partner with women's groups, disability organizations, and youth organizations to maximize recruitment of young women and PWDs. Private sector partners will co-sponsor events, scale solutions, and provide employment opportunities to beneficiaries.

Subcomponent 2.2. Digital Innovation Flagship: Drones for Development (US$1.3 million)

The project will advance Sierra Leone's innovative ecosystem and strengthen the country's position as an innovative hub in West Africa by developing drone ecosystem as an innovation flagship initiative. The key activities include: (i) Review and finalization of the draft Drone Regulation currently being developed by NCAA, which will set the regulatory foundation of safe drone usage in Sierra Leone; (ii) development of the National Drone Policy and Strategy to set the strategic vision for maximizing the potential of drone applications in key sectors; (iii) drone use case development in prioritized sectors and demonstration of at least three use cases (two use cases for climate risks, such as cadastral mapping and agricultural crop monitoring), including stakeholder and community engagement to sensitize the use of drones and stimulate youth; grow Sierra Leone's digital innovation capacity; and develop private sector links to facilitate the local drone ecosystem development; and (iv) training and capacity building for drone operation in the identified use cases for drone practitioners and stakeholders, ensuring the recruitment and participation of women entrepreneurs.

Component 3: Laying Key Foundations for Digital Government Services (US$19.8 million)

This Component aims to build the core infrastructure and institutional capacity to strengthen digital public service delivery, build prioritized services and systems, and enhance the Government's operational efficiency.

Subcomponent 3.1. Enabling Environment for Digital Government (US$3.6 million)

This subcomponent aims to establish the enabling policy, legal and regulatory, institutional, and technical environment in which the building blocks of digital government will be implemented at scale without duplication or inefficiencies across various MDAs.

Policy, legal and regulatory frameworks for digital government. The activity will review, implement, and modernize policy, legal and regulatory frameworks to support and accelerate the digital government agenda. Currently, the Data Protection and Privacy legislation completed nationwide validation processes and is pending approval at the Cabinet, and the new Electronic Data Act is under Parliamentary review. The project will finance the review of these legislations to ensure that they are aligned with international best practices.

Technical frameworks for digital government. The project will lay the technical frameworks necessary for shared government systems and services. The activity will develop and implement the Digital Service Standards to guide the ideation, design, implementation, and operation of citizen-centric services, which will contain best practice principles, instruction guides, and templates to aid the public sector in delivering quality services with consistency. The Standards, once developed, will be applied to the e-services to be developed and demonstrated under the subcomponent 3.3. The activity will further support the implementation of enterprise architecture (EA) and government interoperability framework (GIF), which are currently being developed by the government in partnership with UN Foundation's Digital Impact Alliance (DIAL), to at least ten MDAs in order to enable efficient and secure intragovernmental data exchange. Prior to the implementation, the activity will provide TA to develop transition architecture and governance mechanisms for implementation of the EA to assess the existing EA efforts for alignment with international frameworks, and to describe and facilitate the desired state and roll-out of the EA and GIF.

Organizational Change Management. The activity will provide TA and capacity building to strengthen organizational change management for effective digital transformation in public service delivery, targeting political leaders and senior civil servants as well as public sector IT professionals and civil servants. The activities will include conducting a change management assessment to identify challenges faced by political leaders and senior civil servants; developing an action plan to mitigate the identified challenges in adopting and using these project investments; and developing a communications plan to outline key goals, target stakeholders, and convey key messages, outreach approaches, and timeline details. This activity's training will focus on developing skills for digital leadership, technologies, project planning and operational management; and will incorporate lessons on the Digital Service Standards for officials involved in public service planning, design, development, and deployment.

Open Data. The project will scale up and strengthen Sierra Leone's Open Data initiatives and Data Analytics in line with the recommendations of World Development Report 2021: Data for Better Lives. The project will finance: (i) TA for the development of streamlined procedures for information disclosure and practices for regularly updating the disclosed data (quarterly, semi-annually); (ii) pilot implementation of the data disclosure procedures and practices across selected MDAs; (iii) capacity development to select MDAs for increasing data analytics, with a particular focus on strengthening data-driven climate resilience measures for disaster risk management and early warning practices; and (iv) partnership development with entrepreneurs and technology hubs

to incentivize the use of open government data in the form of hackathons or challenge funds in tackling climate risks in Sierra Leone in connection with the subcomponent 2.1.

Subcomponent 3.2. Government Service Delivery Infrastructure and Networks (US$10.1 million)

This subcomponent aims to strengthen key infrastructure and network for digital government service delivery. It will address and implement prioritized government data hosting and storage infrastructure and network upgrades, assess current gaps in establishing a national cloud-enabled data center, establish a common notification and communications platform to serve the needs of MDAs to notify and communicate with citizens, and pilot DAPs for citizens to bridge the digital divides. Key activities will include:

Digital government data hosting, service delivery infrastructure, and network upgrades. The project will finance a TA to assess the data and application hosting needs for digital services and systems implemented under subcomponent 3.3. Also, the project will provide TA to conduct a comprehensive assessment of the current government networks (Government Wide Area Network (GWAN) and Government Local Area Network (GLAN)), and to develop a transition strategy with a phased implementation plan to guide MIC toward an optimal network design that is aligned with international network standards. The project will subsequently finance part of phase 1 of the implementation plan with an estimated network connectivity for 50 prioritized MDAs.

Shared data hosting solution/government cloud. The project will finance a TA to conduct a gap assessment of government data hosting and storage infrastructure; and to develop recommendations on the technical architecture and operational design needed to address existing core infrastructure gaps, including the development of blueprints to guide government-wide implementation for shared government data infrastructure with disaster recovery capabilities. The TA shall provide recommendations on policies, processes, and standards to support the set-up and operationalization of shared government data hosting and storage infrastructure, such as a cloud-enabled data center which serves to provision data and application hosting to MDAs.

Government notification and communications platform. The project will finance a TA to support the rationalization and synthesis of the two existing platforms. One of these platforms is the GSP, implemented by the Directorate of Science, Technology, and Innovation (DSTI), which presently offers communication channels inclusive of USSD and short message service (SMS); the other is the Government Integrated Messaging System (GIMS), which offers email, short code messaging, and online chat. The objective is to provide a unified and simplified notification and communications platform to serve the needs of MDAs in notifying citizens of public service transaction statuses; soliciting feedback from citizens; and broadcasting messages (for example, emergency alerts). This activity will contribute to a significant enhancement of cCE channels in Sierra Leone and will facilitate more frequent and timely communication between citizens and the government.

Digital Access Points (DAPs). The project will pilot establishment of DAPs for citizens by leveraging existing citizen-facing outlets such as post offices, digital learning hubs, internet cafes, etc. in order to provide citizens with access to the internet and to basic government and private sector services. The DAPs will be distributed across the central business district, the west end, and

the east end of the capital. The project will first finance a TA to conduct a feasibility study to identify potential sites to serve as DAPs, and to assess the availability of internet connectivity and the viability of providing key Government-to-Citizen (G2B)/ Government-to-Business (G2C) public services with a list of potential e-services to be provided. The project will subsequently finance the pilot to deploy selected DAPs based on the findings of the feasibility study, which will consider the demand for services as well as demographic information to maximize accessibility for women and PWDs.

Subcomponent 3.3. Demonstration of Digital Services and Systems (US$6.1 million)

This subcomponent will support the implementation of selected prioritized digital services for which there is a high demand. It will finance at least three high-impact citizen/business service developments based on the public service landscape review. It will also support digitalization of the three distinct branches of the Government by developing the Electronic Cabinet System (e-Cabinet) to support evidenced-based decision making; developing the Electronic Parliament System (e-Parliament) to strengthen the bond between parliamentarians and their constituents; and providing a TA to establish a blueprint for an electronic justice system (e-Justice) in Sierra Leone.
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Government-to-Citizen (G2C) and Government-to-Business (G2B). The project will finance a TA to conduct a public service landscape review to prioritize high-demand, high-impact digital services suitable for implementation. It will subsequently finance the development of at least three public services (such as applications for birth certificates, death certificates, and driver's licenses), applying the Digital Service Standards highlighted under subcomponent 3.1 to align with good practices on design thinking principles. The services will be implemented through a prototyping approach in order to facilitate iterative feedback by citizens and public sector stakeholders, to ensure that their needs and expectations are being adequately addressed.

Government-to-Government (G2G) systems. The project will finance the digitization of processes and documents essential for the Parliament to strengthen the bonds between parliamentarians and their constituents, and for the Cabinet to realize an evidenced-based decision-making platform. The activity will support the development of an electronic document and record management system to improve the clarity and accuracy of Cabinet records in line with the ongoing e-Cabinet initiatives by the government. It will also support the development of the e-Parliament system to enable communication and information exchange between parliamentarians and with their constituents. This system will integrate relevant stakeholders and processes into an orchestrated platform. Lastly, the activity will finance a TA to establish a blueprint of an e-Justice system to accelerate digitization and enhance the efficiency of judicial services in Sierra Leone. Given the complexity of this initiative and the government's limited budget, the actual implementation of e-Justice is not anticipated under this project.

Component 4: Project Management and Implementation Support (US$3.6 million)

This component will finance the Borrower's project management and coordination capacity, including procurement, financial management (FM), monitoring and evaluation (M&E), environmental and social (E&S) safeguards management, project communication, and

citizen engagement. This component will also cover modest office equipment and independent audits and learning/training for key beneficiaries (e.g., Project Coordination Unit (PCU) staff and the Technical Committee) to support the public sector's ability to build and retain skills for implementing whole-of-government digital transformation. Moreover, special attention will be devoted to promoting equal participation of women in all decision-making bodies under the project and contributing to tackling barriers in recruitment, retention, and promotion.

Citizen Engagement (CE) support will be financed under this subcomponent and include: (a) the development and implementation of a comprehensive grievance redress mechanism (GRM) to collect and respond to issues encountered by beneficiaries, system users, other system stakeholders, as well as the general population, including links between the GRM and M&E systems in order to improve project monitoring data; (b) the development of a comprehensive CE strategy and national consultation mechanism to ensure that all relevant stakeholders, including beneficiaries and marginalized groups, are consulted about the project design and implementation on at least an annual basis and the feedback from those consultations is fed back into the implementation plan and design of project-financed systems; (c) qualitative user research to identify barriers to accessing and successfully using project-financed systems and services, particularly barriers faced by marginalized groups and underserved populations, and inform the design and implementation of the activities; and (d) surveying usage and satisfaction of users of project-financed systems and services.

Component 5: Contingent Emergency Response Component (CERC) (US$0.0 million)

In the context of the COVID-19 crisis, a Contingent Emergency Response Component (CERC) is added to the project structure to provide support to the Government to swiftly respond to an eligible crisis, including climate or natural disasters and public health emergencies. Including CERC at the preparation stage, albeit with zero funding, provides for flexibility for an agile response to an imminent or actual emergency (such as COVID-19) through quick disbursement of uncommitted balances from other components. The crisis response expenditures could cover, for instance, the facilitation of emergency payments to vulnerable groups of population using mobile money or ensuring business continuity of core government functions, when civil servants are required to continue home-based work. The CERC is not expected to finance civil engineering works that can induce risks and/or negative environmental and social impacts. However, CERT component is not added to finance any activities that include adverse environmental and social risks and impacts.

1.3. Project Activities with Potential E&S Risks

Based on the project description, the potential intervention in the project that could have environmental and social risks and impacts are:

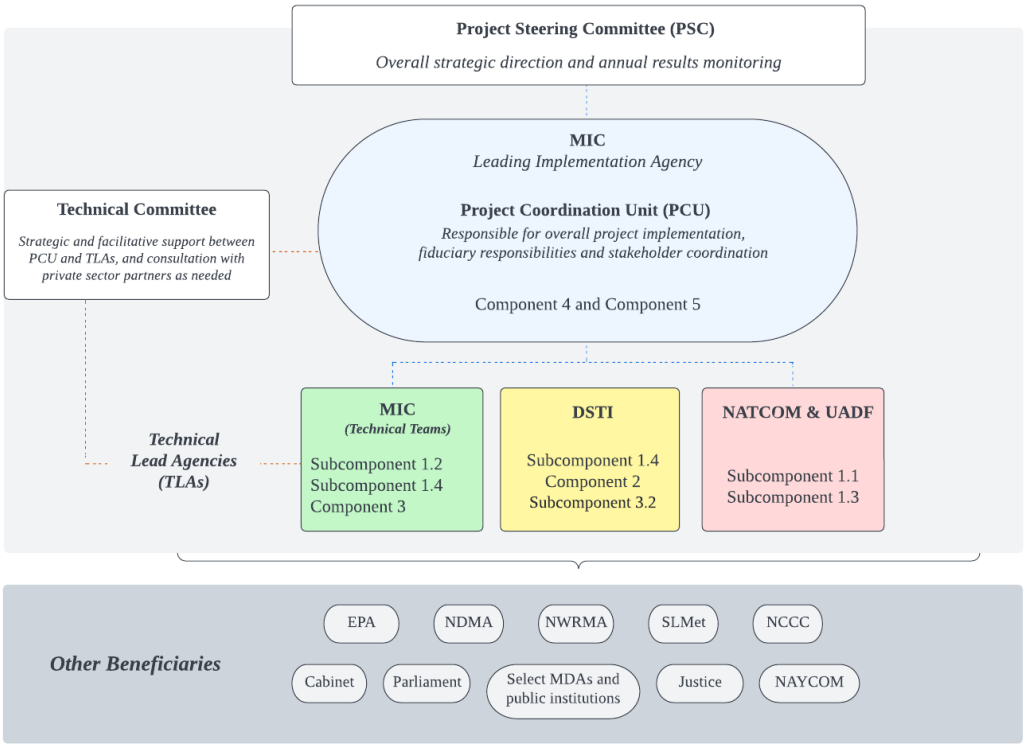
1. provision of Last-mile Connectivity Access for Public Institutions under subcomponent 1.2 to expand high-speed broadband connectivity for selected priority public institutions at the central and local levels in Freetown and secondary cities that currently do not have broadband access. The approach is to incentivize private sector network providers through competitively contracts to guarantee long-term supply agreements with GoSL. These investments may include laying fiber cables, replacement of microwave links, etc.
2. civil works under subcomponent 3.2 on Government Service Delivery Infrastructure and Networks, which includes establishing some Digital Access Points (DAPs) on a pilot basis such as post offices, digital learning hubs, internet cafes, etc.

The project will also finance TA activities, providing subsidies and procurement of equipment. Activities under subcomponent 4.3 to support the GoSL with developing e-waste management policy framework based on a circular economy approach as an initiative to green the ICT sector. This will include a quantitative and qualitative baseline assessment, baseline studies to assess the footprint of e-wastage in Sierra Leone and support for finalization of the e-waste management policy in Sierra Leone. The project will also engage consultants to carry out the digital capacity building trainings and contractors to install IT equipment.

1.4. Institutional and Implementation Arrangements

This project will be implemented by a dedicated Project Coordination Unit (PCU) under the Ministry of Information and Communications (MIC) as the main implementing agency. MIC will have the overall responsibility for handling the day-to-day coordination of project activities. The PCU will be responsible for the preparation of annual work plans and budgets, fiduciary arrangements and reporting, preparation of Terms of References (ToRs) and specifications, project monitoring and reporting, as well as general stakeholder coordination. Considering the Ministry's mandate to lead Sierra Leones digital development agenda and overall coordination among MDAs, MIC will coordinate with relevant MDAs, key stakeholders responsible for various aspects of the project implementation and serve as communication lead for project activities and outcomes. At a minimum, the PCU will be staffed with a Project Coordinator; Deputy Project Coordinator, M&E Specialist; Procurement Specialist, FM Specialist, and **Environment and Social Safeguards Specialist** (responsible for routine monitoring, the review of safeguard instruments, and the delivery of trainings to contractors and their staff). Other technical expert positions and administration positions will be added accordingly, or PCU may consider hiring technical consultants/experts on a part-time basis. PCU will report directly to Hon Minister of MIC. All PCU staff will report to Hon Minister of MIC through the PCU Project Coordinator. The PCU structure under the MIC will remain the same even if a new government agency (National Digital Development Agency (NDDA) might be established during the project implementation period. A Project Implementation Manual (PIM) will be adopted to guide the implementation arrangements for key stakeholders, such as project review process, strategic guidance/recommendations over project implementation, coordination of roles and responsibilities of the committees and technical implementation agencies, project beneficiary agencies, etc. (see Figure 1-1).

Figure 1-1: SL DTP Project Implementation Arrangement



Technical Lead Agencies (TLAs) consist of the implementing institutions for the overall project. The TLAs for the Project comprise of MIC, DSTI, NATCOM, and UADF. The TLAs provide technical lead and oversight of the respective project subcomponents and activities, however, procurement process and FM reporting will be centrally administrated in the PCU in MIC. Each TLA will designate a project focal point who will work closely with the relevant Technical Specialists in the PCU. PCU will provide quality oversight and technical support to TLAs, as needed.

A Project Steering Committee (PSC) will be established to provide guidance throughout project implementation. PSC will be co-chaired by Hon Ministers of MoF and MIC. A wide range of government stakeholders related to the country's digital transformation agenda will be a member in the PSC, including but not limited to: DSTI, NATCOM, UADF, NCRA, Central Bank of Sierra Leone (BSL), National Revenue Authority (NRA), Ministry of Trade and Industry The detail composition and mandate of the PSC will be further defined through Terms of Reference (TOR) to be developed and TORs will be included in the project implementation manual (PIM) prepared by project effectiveness.

A Technical Committee (TC) will be established to facilitative and provide problem-solving support to the project and will be comprised of each TLA focal point, with discussions led by the Project Coordinator. This committee will be chaired by Hon Minister of MIC (or delegated senior officials either Deputy Minister, or Permanent Secretary of MIC) and consist of the relevant TLA focal points and key beneficiary institutions. The TC can escalate issues, as needed, to the PSC if they require strategic discussion. The TC can reach out or engage with private sector or industry

groups for relevant issues. A Terms of Reference (ToR) explaining roles and responsibilities, objective, and expected output will be prepared and included in the PIM. The Project Coordinator will serve as the Secretary and lead for technical and operational discussions.

1.5. Results Monitoring and Evaluation Arrangements

The PCU through the ESS Specialists will have responsibility for monitoring and evaluating and reporting to the World Bank Task Team on the implementation of the ESMF. The results will be tracked by Component by the PCU M&E specialist with support and inputs from the ESSS. Also, the PCU will prepare regular progress reports for submission to the WB as agreed with the Task Team and using the agreed template. The details will be defined in the PIM.

1.6. Purpose of the ESMF

The primary purpose of this Environmental and Social Management Framework (ESMF) is to assist MIC in examining the environmental and social risks and impacts of the SL DTP's subprojects. It guides the MIC to assess potential environmental and social risks and impacts of SL DTP's interventions when subprojects' locations cannot be determined during project preparation. In absence of detail information on subprojects to be supported by SL DTP, this ESMF sets out the principles, rules, guidelines, and procedures to assess the potential environmental and social risks and impacts. It contains measures and plans to reduce, mitigate and/or offset adverse risks and impacts, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing project risks and impacts, including on its capacity to manage environmental and social risks and impacts. It includes adequate information on the area in which subprojects are expected to be sited, including any potential environmental and social vulnerabilities of the area; and on the potential impacts that may occur and mitigation measures that might be expected to be used. This ESMF include guideline for Labour Management Procedure (LMP), outline for preparing and implementing sound E-waste Management Plan and chance finding procedures.

This ESMF also provided E&S screening tool (**see Appendix 15-1**) that the project will utilize when identifying the potential E&S risks and impacts of subprojects and determine which environmental and social planning instruments will be required to mitigate site specific impacts on the environment and Project Affected Persons (PAPs) including Resettlement Plans/ Livelihood Restoration Plans etc.

ESMF Outline

1. A non-technical executive summary
2. Background
3. An introduction describing the proposed project, with an emphasis on project scope, ESMF purpose, objectives, approach and methodology
4. Policy, Legal and Institutional Framework
5. Environmental and Social Baselines
6. Potential Environment and Social Risks and Impacts
7. Analysis of Alternatives
8. Proposed mitigation measures
9. Environmental and Social Management Plan (ESMP) requirements
10. Institutional Arrangement for ESMF implementation

11. Capacity building and training required to implement the ESMF
12. Public consultations, participation and information disclosure
13. Grievance Redress Mechanism (GRM);
14. Monitoring and Evaluation
15. Budget and Source of funding
16. Annexes

1.7. Approach and Methodology

The ESMF has been prepared in accordance with WB's Environmental and Social Framework (ESF) requirements and applicable Sierra Leone environmental assessment procedures and guidelines. The following approach and techniques were used in the development of the ESMF:

- Literature review and data gathering through desktop study;
- Participatory public consultations and discussions with relevant sector institutions including Ministries, Departments and Agencies (MDAs), private and public innovation ecosystem providers, telecom providers, vulnerable groups, and Non-Governmental Organizations (NGOs); The main issues discussed with focus groups included:
- Data analysis for risks/ impacts identification and guidelines for the preparation of subprojects Environmental and Social Management Plans (ESMPs): Although specific projects to be implemented under the SL DTP are not known at this stage, potential impacts were identified through initial generic screening of the proposed sub- projects considering the socio-environmental conditions: field visits and consultations with focused groups.
- Review of comments and feedback from stakeholders; and
- Finalization of the ESMF for disclosure.

1.8. Project Scope and Duration

The SL DTP seeks to expand access to broadband internet, increase digital skills and improve government capacity to deliver public services digitally. The project is expected to be implemented during the period 2022-2027.

2. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

The SL DTP will strictly adhere to and follow the World Bank's Environmental and Social Framework (ESF) as well as the legal and regulatory frameworks of Sierra Leone. This section provides an overview of relevant policies, laws and regulations that will guide the implementation and operation of the project. The key environmental policies, legal framework and procedures considered as relevant under the SL DTP are presented hereunder.

2.1. National Environmental and Social Policy Framework

The national policies identified as relevant or applicable to the SL DTP are presented in **Table 2-1** and these include:

- National Social Protection Policy (2011 and revised 2018)
- National Lands Policy, 2015/Land Tenure and Ownership
- National Environmental Policy (NEP) 2013
- Development-Induced Resettlement Policy 2020
- National Biodiversity Strategy and Action Plan 2017–2026
- National Disaster Risk Management Policy, 2018
- The National Water and Sanitation Policy, 2010
- National Policy on the Advancement of Women, 2000
- National Policy on Gender Mainstreaming, 2000
- The GBV Referral Protocol, 2019
- The Right to Access Information Act, 2013
- Public Health Ordinance, 1960
- Public Health Amendment Act, 2004
- National Action Plan for Health Security, 2018

Table 2-1: Relevant National Policies and Applicability to the Proposed Project

No.	Policy and Key Requirements	Applicability/ Relevance to Proposed Project
1	**National Social Protection Policy (2011 and revised 2018)** Sierra Leone adopted a framework for guiding social protection policy in 2011. The GoSL adopted the National Social Protection Policy (NSPP), a framework developed with the support of the World Bank, to guide the implementation of social protection (SP) in Sierra Leone. Recognizing that several vulnerable groups in the population were not able to enjoy the benefits of economic growth, the policy identified the major groups of people – the chronically poor, the economically at risk and the socially vulnerable – as those in urgent need of social protection. Sierra Leone adopted three major programs under its SP policy. Consistent with the priorities stated in the NSPP, three major programs were selected from areas covered in the policy, including: (i) a cash transfer to very poor households with children; (ii) a social pension targeted at war victims and the elderly supervised by the Ministry of Labour and Social Security; and (iii) a permanent labour-intensive public works program that seeks to help the unemployed and those rural and urban households that are seasonally exposed to food insecurity. The national development plan for 2019-2023 envisaged a minimum package of protections for all citizens. It also identified the following policy action areas, among several others, to strengthen the SP framework in the country:	All project activities can be linked back to the policy, and by supporting access to social protection programs by the major target group - the chronically poor, the economically at risk and the socially vulnerable – identified by the policy.

No.	Policy and Key Requirements	Applicability/ Relevance to Proposed Project
	1. Strengthen the National Commission for Social Action (NaCSA) to coordinate all national social protection programmes through the requisite legislative and policy frameworks. 2. Develop resilience to natural disasters by establishing a social safety net fund for emergency response. 3. Create targeted employment schemes (i.e. cash-for-work and food-for-work programmes) for youth, women, and others, especially the most vulnerable of these groups, through public–private partnerships and development partners.	
2	**National Lands Policy, 2015/Land Tenure and Ownership** The Land Policy of Sierra Leone aims at the judicious use of the nation's land and all its natural resources by all sections of the Sierra Leone society in support of various socioeconomic activities undertaken in accordance with sustainable resource management principles and in maintaining viable ecosystems. Among other objectives, it aims to instil order and discipline into the land market to curb the incidence of land encroachment, unauthorized development schemes, multiple or illegal land sales, falsification and multiple registration of land documents, land speculation, and other forms of land racketeering. The National Lands Policy introduces a Lands Commission and committees, which would be established at the national, district, chiefdom, and village levels to ensure the proper management of land titles. A Land Commission Bill 2020 is being finalized. The cadastre systems in the country are outdated and inaccurate. Surveying quality is inadequate due to lack of trained surveyors in modern electronic surveying and mapping techniques and a shortage of equipment. Land administration in Sierra Leone is governed by a dual system of law, dispersed in about 20 statutes and regulations; in the Western Area of Sierra Leone, land tenure is governed by property statutes. Land is either state (publicly) owned or privately owned. In the provinces, customary law co-exists with statutes. The recognition of the force of customary law in the provinces is established by Section 76 (1) of the Courts Act (1965). Through customary law, ownership of land is vested in the chiefdoms and communities and can never be owned freehold.	The construction and operation of the proposed project will occur mainly within existing Right-of-Way (RoW) of the road. However, other project activities will require land take while campsites will require temporary occupation of land and/ or expropriation.
3	**National Environmental Policy (NEP) 2013** This National Environmental Policy seeks to achieve sustainable development in Sierra Leone through the implementation of sound environmental management systems which will encourage productivity and harmony between man and his environment. It also promotes efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of nationals and serves to enrich the understanding of ecological systems and natural resources important to the Nation. Thus, the key objective of the policy is to secure for all Sierra Leoneans a quality environment that can adequately provide for their health and well-being. The policy indicates inter-sectoral synergies in major areas for policy formulation. It takes into consideration major sector goals and policies for enhancing sustainability in environmental management systems. The following sectoral policies are highlighted within the National Environmental Policy: • Land Tenure, Land Use and Soil Conservation; • Water Resources Management; • Forestry and Wildlife; • Biodiversity and Cultural Heritage; • Air Quality and Noise; • Sanitation and Waste Management; • Toxic and Hazardous Substances; • Working Environment (Occupational Health and Safety); • Energy Production and Use; • Settlements, Recreational Space and Greenbelts; • Public Participation; • Quality of Life; • Gender Issues and the Environment; • Institutional and Government Arrangements; and	The proposed project seeks to promote sustainable development by including biophysical environmental (e.g., for e-waste management), economic, social, and institutional considerations in the project formulation.

No.	Policy and Key Requirements	Applicability/ Relevance to Proposed Project
	• Legal Arrangement.	
4	**Development-Induced Resettlement Policy 2020** This policy applies to any project, development, or business activity undertaken by either the government or private sector entities that results in, or is likely to result in, the physical or economic displacement of people. The policy establishes the rationale, objectives, guiding principles, and strategies for the undertaken involuntary resettlement. In the policy, involuntary resettlement should always be considered as the last resort, conceived, planned, and implemented in a manner that minimizes the adverse impacts on PAPs and improve or at least maintain the standard of PAPs pre-impact through informed consultation of all stakeholders including vulnerable PAPs. The policy, which indicates that compensation must be at full replacement value, takes the position that compensation should be completed before physical movement.	The physical displacement may be accompanied by the payment of compensation and the need to consider livelihood restoration programs. The RPF for this project provides ample guidance of how such issues will be addressed.
5	**National Biodiversity Strategy and Action Plan 2017–2026** The revised NBSAP (2017–2026) for Sierra Leone has been developed based on national needs and priorities for the implementation of the United Nations Convention on Biological Diversity (CBD) objectives and Aichi Targets. Key lessons learned from the development of the NBSAP 2004–2010 were fed into the review and development of the NBSAP 2017–2026. Additional priority thematic areas were identified and addressed, such as intellectual property rights and climate change, collaboration between stakeholders, the problem of overlapping mandates, and conflict of interest among government agencies. The updated NBSAP has five strategic objectives consistent with the five strategic goals of the CBD, followed by a total of 23 strategic outputs.	The proposed project/ subprojects may traverse lands/locations which may have species biodiversity hence the need to acquire entry permit(s)
6	**National Disaster Risk Management Policy, 2018** The policy vision is to have "A safer and resilient nation in which communities, the economy and the environment are better protected from the negative impacts of hazards, through appropriate comprehensive disaster risk management." Sierra Leone is increasingly vulnerable to natural and man-made hazards. The DRM policy aims to establish processes, procedures, and structures for the coordination and effective integration of disaster reduction into development planning and sector policies, delivery of required assistance, and addressing of the consequences of disasters declared in Sierra Leone under the appropriate national legislation. The DRM policy includes clear roles and responsibilities for national and local governments and development partners to implement a timely response to disasters while also integrating local-level communities into effective disaster management systems.	The proposed project will comply with the related policy for a sustainable project.
7	**The National Water and Sanitation Policy, 2010** Safe drinking water and good sanitation practices are basic requirements for human health. This policy covers only issues directly related to the environmental sustainability of sanitation systems and not all environmental issues in Sierra Leone. Specific strategies are stated to implement the policy covering, among others, environmental impacts, water quality, requirements for sanitation services, and the role of LCs.	The implementation of the proposed project takes into consideration measures to promote healthy sanitary practices at the construction sites, workplaces and campsites
8	**National Policy on the Advancement of Women, 2000** The National Policy on the Advancement of Women provides conducive environment, which will allow women to improve their status and participation, to empower them and enhance their capacities as agents of change and beneficiaries of political and economic development, thus ensuring the full use of human resources for national development. It provides integrated guidelines for evaluating the activities of government department/institutions, civil society organizations, donor agencies and NGOs that are engaged in implementing Women in Development programs.	The criteria for selecting workers under this project will include ability to perform tasks rather than gender
9	**National Policy on Gender Mainstreaming, 2000** The overall goal of the policy is to mainstream gender concerns in the national development process to improve the social, legal, political, economic, and cultural condition of the population, particularly marginalized groups. Its aim is to provide for policy makers and other actors in the development field, reference guidelines for identifying and addressing gender concerns, particularly when taking policy decisions to redress imbalances which arise from existing inequalities; to promote access to and control	Women under this project will be given equal opportunities as men.

No.	Policy and Key Requirements	Applicability/ Relevance to Proposed Project
	over economically significant resources and benefits, or to ensure the participation of both women and men in all stages of development.	
10	**The GBV Referral Protocol, 2019** The GBV Protocol is a technical guidance document that aims to ensure that all survivors/victims of GBV receive a prompt and comprehensive response from service providers that meets their needs from the first point of contact onwards.	The proposed project will comply with the guidance of the Protocol
11	**The Right to Access Information Act, 2013** Being an Act to provide for the disclosure of information held by public authorities or by people providing services for them and to provide for other related matters. This implies that the PIU is mandated by this Act to disclose all the relevant information about the project to affected and interested stakeholders and that failure to supply information to stakeholders is tantamount to an offense which is liable on conviction to a fine not exceeding ten million Leones in the case of an individual and one hundred million Leones in the case of a body corporate or to a term of imprisonment not exceeding six months or to both the fine and imprisonment.	All project stakeholders will have access to relevant information.
12	**Cultural Heritage** The National Environmental Policy provides for the collection of relevant data on biological diversity and cultural heritage. It seeks to promote socioeconomic and cultural development through the preservation of biological diversity for a sustainable utilization of natural resources. There are references to the preservation and/or respectful removal (considering cultural sensitivities) of 'society bushes' for mining and other purposes in various regulations. The Monuments and Relics Commission was established in 1948 following the passing by Parliament of the Monuments and Relics Ordinance in 1946. The mandate of the commission is to provide for "the preservation of ancient, historical and natural monuments, relics and other objects of archaeological, ethnographical, historical or other scientific interest." In 1962, this ordinance was upgraded into an act. The commission has the responsibility of ensuring the preservation, protection, and promotion of Sierra Leone's cultural heritage assets.	In the case where cultural heritage assets are found during the project, a report will be made to the Monuments and Relics Commission immediately.

2.1.1. Relevant Legal and Regulatory Framework

The relevant environmental laws and regulations to guide MIC from the conceptualization stage of the project to implementation and monitoring as well as decommissioning are as presented in **Table 2-2** and these include;

Environmental Protection, Planning and Permitting:

- Constitution of Sierra Leone
- Environment Protection Agency Act, 2008/2010
- The Anti-Corruption Act, 2008
- The Sierra Leone Water Company Act, 2017
- The Guma Valley Water Company Act, 2017
- The Sierra Leone Meteorological Agency Act 2017
- The Forestry Act: 1988
- National Water Resources Management Agency Act

Health/Safety

- Public Health Ordinance, 1960
- Public Health Amendment Act, 2004
- National Action Plan for Health Security, 2018

Labour Rights/Issues

- Persons with Disability Act, 2011
- Laws related to GBV and Sexual Exploitation and Abuse (SEA)

- Child Right Act, 2007
- The Sierra Leone Local Content Agency Act, 2016

Land Acquisition/Land Use

- Sierra Leone Roads Authority (Amendment) Act 2010, Road Transport Authority Act (1996) (Amended to the Roads Safety Authority Act, 2016)
- National Resettlement Policy, 2021

Local Governance and Alternative Dispute Resolution

- Local Government Act, 2004
- Local Government Amendment Act, 2017

Table 2-2: Relevant Legal Framework and Applicability to the Proposed Project

No.	Legal Framework and Key Compliance Requirements	Applicability to Proposed Project
	Environmental Protection, Planning and Permitting	
1.	**Constitution of Sierra Leone** The Constitution states that the state shall, among other things, within the context of the ideals and objectives for which provisions are made in the Constitution, harness all the natural resources of the nation to promote national prosperity, manage and control the national economy well, and be governed through the Executive, Legislative, and Judicial branches of Government. Section 106(1) of the Constitution of Sierra Leone gives Parliament the power to make laws which shall be exercised by bills passed by Parliament and signed by the President. Subject to certain provisions, a bill shall not become law unless it has been duly passed and signed in accordance with the Constitution. An act signed by the President shall come into operation on the date of its publication in the Gazette or such other date as may be prescribed therein or in any other enactment.	MIC will ensure that the project complies with relevant constitutional provisions. Relocation of temporary structures, demolition of permanent structures and expropriation of land will be adequately compensated for.
2.	**Environment Protection Agency Act, 2008/2010** The EPA Act, 2008, is the GoSL's overarching legislation that deals with the protection of the environment. Part IV of the EPA Act, 2008, exclusively deals with the activities and requirements of an EIA. This part of the act emphasizes the processes and procedures leading to the acquisition of an environmental license with respect to the conduct of fully acceptable EIA studies. Projects requiring an EIA are as given in the first schedule (Section 24) of the act. The second schedule (Section 25) of the EPA Act, 2008, gives several factors which determine whether a potential project necessarily must prepare an EIA, for approval to implement its activities on the environment. The third schedule (Section 26) of the act indicates the contents to be considered in preparing the EIA.	The EIA study for sub-projects including this ESMF concerning the implementation of proposed project will follow the Environmental Assessment (EA) procedures requiring approval by EPA.
3.	**The Anti-Corruption Act, 2008** The Act provides for the establishment of an independent Anti- Corruption Commission for the prevention, investigation, prosecution and punishment of corruption and corrupt practices and to provide for other related matters. The functions of the Commission include, but not limited to: • Detect or investigate any act of corruption • Examine the practices and procedures of public bodies to facilitate the discovery of corrupt practices or acts of corruption and to secure revision of those procedures to reduce or eliminate the occurrence of corrupt practices • Monitor in such manner as it considers appropriate the implementation of any contract awarded by a public body with a view to ensuring that no irregularity or impropriety is involved therein • Educate the public on the dangers of corruption and the benefits of its eradication and to enlist and foster public support combating corruption	The proposed project will follow the Act
4.	**The Sierra Leone Water Company Act, 2017** The act establishes provisions for the continuance in existence and effective management of the Sierra Leone Water Company (SLWCO) to provide more efficient and effective management of community and rural water supply systems in specified areas and to provide for the facilitation of water-related sanitation and water delivery in Sierra Leone.	The MIC and contractors will be required to acquire a water use permit after obtaining the environmental permit for the

No.	Legal Framework and Key Compliance Requirements	Applicability to Proposed Project
	Some of the responsibilities of the company include the following: • Provide technical support to District Councils in the design, planning, construction, backup services, and community management of projects related to safe water supply and related sanitation services. • Assist and coordinate with NGOs, the private sector, and other relevant providers in the development and provision of water supply and related sanitation services in the country.	abstraction of water for construction purposes
5.	**The Guma Valley Water Company Act, 2017** The act has provisions for the Guma Valley Water Company (GVWC) to continue to exist, for the sustainable supply of water for public and private use. The objective for which the company is established is to produce, distribute, and conserve water within the limits of supply and other areas as may be determined by the commission. The company, among other things, exercises responsibility for the control, development, and management of Guma works and water supply services within the limits of supply, which is mainly in Freetown; construct, reconstruct, rehabilitate, repair, and maintain waterworks, buildings, and other infrastructure of the company; and lay main and service pipes in any street or other public place within the limits of supply. Access to fresh water in Freetown is mostly challenging, especially for poor households. However, with the provisions of the act and its full execution, there is a likelihood that Guma would be able to make potable water accessible to all persons/households. This act ensures that the GVWC is run more efficiently by clearly defining its functions and the management structure. Most communities in Freetown now have community pumps that provide potable water for poor households within proximity.	The MIC and contractors will be required to acquire a water use permit after obtaining the environmental permit for the abstraction of water for construction purposes
6.	**The Sierra Leone Meteorological Agency Act 2017** The act is aimed at establishing the Sierra Leone Meteorological Agency. The agency will be responsible for informing the public about weather patterns based on the recordings of credible and reliable weather data for agriculture, marine, and disaster preparedness relating to early warning signs. The act also emphasizes some functions of the agency as follows: • Promote the use of meteorology in agriculture; food monitoring; and the monitoring of flood, drought, desertification, and other related activities. • Establish, organize, and manage both surface and upper air observational station networks throughout Sierra Leone as approved by the board. • Collect, process, store, and disseminate meteorological and climatological information both nationally and internationally in accordance with rules and practices and procedures established under various conventions.	The MIC will work closely with the Sierra Leone Meteorological Agency especially in seeking meteorological information and advice
7.	**The Forestry Act: 1988** Section 18 of the Forestry Act stipulates that: The Chiefdom Authorities or Local Council of any chiefdom may conclude an agreement with the Chief Conservator of forests providing for the constitution as a community forest of any land within the chiefdom, subject to the approval of the District Officer for the District in which the land is situated.	The MIC and contractors will ensure compliance with the requirements of this Act i.e., traversing any forest
8.	**National Water Resources Management Agency Act** The act is aimed at establishing the National Water Resources Management Agency which shall be responsible to ensure that the water resources of the country are controlled in a sustainable manner considering. The act emphasizes some functions of the agency as follows: • adopting natural river basin and aquifer boundaries as the basic units of management of water resources; • protecting the water resources for sustainability of the resource and protection of aquatic systems and recognizing the polluter-pays principle; • providing for existing customary uses of water and avoidance of significant harm to other users; • promoting the efficient and beneficial use of water resources in the public interest; • promoting community participation and gender equity in the allocation of water resources; • promoting conservation and recognizing the economic value of water resources; • reducing and preventing pollution and degradation of water resources and; • meeting international obligations in protecting and managing transboundary water bodies.	The proposed project will involve traversing water courses, sourcing water from nearby streams, diverting and/ or obstructing the flow of the nearby streams for construction purposes. The appropriate authorization will be sought from the Agency prior to the commencement of work(s).

No.	Legal Framework and Key Compliance Requirements	Applicability to Proposed Project
	Health/Safety	
9.	**Public Health Ordinance, 1960** This Act provides with respect to matters of public health in Sierra Leone, including, among other things, water supply, drainage, water pollution, sanitation, hygiene and wholesomeness of food, the control of animals, and nuisances.	The MIC and contractors will be guided by this Act in circumstances where civil works or similar interventions will adversely impact water quality and undermine hygiene and sanitation performance.
10.	**Public Health Act, 2004** This Act amends the Public Health Act (Ordinance) of 1960 by the repeal and replacement of the fines contained in the Act.	The MIC and contractors will comply with any fines attributable to actions or decisions taken to affect community health and safety in the ways prescribed in the ordinance above. Steps will be taken to ensure project activities do not lead to any social nuisances and significant environmental impacts.
11.	**National Action Plan for Health Security, 2018** The Sierra Leone National Action Plan for Health Security (NAPHS) is based on the recommendations of the 2016 Joint External Evaluation (JEE). The JEE is a voluntary, collaborative, and multi-sectoral process to evaluate country's capacity to prevent, detect and rapidly respond to public health risks occurring naturally or due to deliberate or accidental events. The JEE process helps countries identify the most critical gaps within their human and animal health systems, to prioritize opportunities for enhanced preparedness and response, and to engage with current and prospective partners and donors to effectively target resources	The MIC and contractors will be guided by this strategy on safety and reporting measures if selected project sites are among hotspots for zoonotic diseases.
	Labour Rights/Issues	
12.	**Persons with Disability Act, 2011** According to Section 24(2) of this act, public buildings/facilities that are accessed by the public are to be disability friendly, while Section 14 (2) enjoins the government to adapt existing structures to enhance access for persons with disability. In Sections 20 and 21 of the Act, it is an offence to deny a person contracts and employment opportunities based on disability.	The MIC and contractors will be guided by this Act in the design of the facilities including buildings and employment of labour for the proposed project and will ensure all labour engaged by the contractors do not discriminate against PWDs
13.	**Laws related to GBV and Sexual Exploitation and Abuse (SEA)** Several legislative and policy frameworks have been established to provide supportive and conducive environment to stem and reduce incidents of sexual and gender-based violence (SGBV) and punish perpetrators. The passage of the three gender acts in 2007—the Domestic Violence Act (2007), the Devolution of Estates Act (2007), and the Registration of Customary Marriage and Divorce Act (2007)— provided concrete legal pronouncements on the rights of women and children which could be drawn on to prevent SGBV and seek redress in the event of occurrence. The Domestic Violence Act "situates domestic violence as a criminal act in and of itself and uses a broad definition of domestic abuse which includes physical and sexual abuses, economic abuses, verbal, emotion and psychological abuse" (Swaine 2012, 8) perpetrated against an individual in a domestic setting. The Devolution of Estates Act aims to address issues of women's inheritance rights by allowing men and women to inherit equally and abolishing customary practices whereby widows were often required to marry a member of their deceased husband's family. A child rights act was also passed in 2007. In 2012, these gender acts were complemented by the Sexual Offences Act, which criminalizes indecent assault and harassment and imposes a maximum 15-year sentence for cases of rape.	The project will adhere to all laws related to GBV and SEA.
14.	**Child Right Act, 2007** Part III of the Act, the Employment of Children stipulates that the minimum age at which free education ends, when children can engage in full time employment or apprenticeship is at fifteen (15 years) though the Act allows children to engage in light work (non-strenuous and non-	The MIC and contractors will be guided by this Act in the employment of labour for the proposed project and will ensure all

No.	Legal Framework and Key Compliance Requirements	Applicability to Proposed Project
	hazardous work) at the age of thirteen (13) but only persons eighteen (18) years and above can engage in hazardous work such as civil works. The Act which prohibits children from working at night also set conditions for apprenticeship.	labour engaged by the contractors are not below the minimum age.
15.	**The Sierra Leone Local Content Agency Act, 2016** The act establishes the Sierra Leone Local Content Agency to provide for the development of Sierra Leone local content to promote the ownership and control of productive sectors in the economy by citizens of Sierra Leone. The primary objective of the agency is to promote Sierra Leone local content development by effectively and efficiently managing the administration and regulation of Sierra Leone local content development. Some requirements stated in the act include those mandating the use of a minimum percentage of Sierra Leonean labour in professional cadres in all contracts awarded above a threshold value as stipulated by the minister and assisting local contractors and Sierra Leonean companies to develop their capabilities to attain the goal of developing Sierra Leone local content in the sectors covered by this act.	The MIC will recruit worker, contractors, and other forms of labour locally to promote the Sierra Leone Local Content
	Land Acquisition/Land Use	
16.	**Sierra Leone Roads Authority (Amendment) Act 2010, Road Transport Authority Act (1996) (Amended to the Roads Safety Authority Act, 2016)** This act amends the Sierra Leone Roads Authority (SLRA) Act (1992) and governs the development, maintenance, efficient planning, and reliable management of the national road network to provide the entire country with a safe, reliable, and sustainable means of transport. To attain set objectives, the authority will, among other things, develop strategies, technical instructions and standards, and programs for roads and provide technical guidance and support to LCs in roads maintenance.	The MIC will have to work closely with SLRA, other road agencies and other utilities companies that have installations in the project area especially, SLWCO, GVWC, electricity companies and telecommunication companies.
17.	**National Resettlement Policy, 2021** Provides a framework for identifying, engaging, and compensating Project Affected Persons. The policy regulates activities undertaken by government interventions that may lead to physical and/or economic displacement and require compensation.	The MIC will work closely with the Ministry of Planning and Economic Development (MoPED), which will house the National Resettlement Secretariat to comply with any requirements set by the policy for engaging and compensating PAPs when the need arises.
	Local Governance and Alternative Dispute Resolutions	
18.	**Local Government Act, 2004** This act deals with the establishment and operation of LCs around the country to enable meaningful decentralization and devolution of government functions. It stipulates that an LC shall be responsible generally for promoting the development of the locality and the welfare of the people in the locality with the resources at its disposal and with such resources and capacity as it can mobilize from the central government and its agencies, national and international organizations, and the private sector. The LC should initiate and maintain programs for the development of basic infrastructure and provide works and services in the locality. An LC shall cause to be prepared a development plan which shall guide the development of the locality. The schedules to the Local Government Act outline the activities of various MDAs that have been devolved to LCs.	The relevant MMDAs will be closely consulted in the implementation of the proposed project.
19.	**Local Government Amendment Act, 2017** The Act amends the Local Government Act, 2004, to provide for the addition of new Districts created under the Provinces (Administrative Division) Order, 2017 and other related matters.	The MIC and contractors shall comply with rules and procedures applicable to the resolution of disputes and for broader local governance where new districts created fall within the project's zone of influence.

Project Standards

The SL DTP will apply the stricter of either national laws or the WBG standards (EHS Guidelines). The Project standards for emissions and performance therefore are the stricter of:

- Sierra Leone standards; and
- Applicable standards of the World Bank Group EHS Guidelines.

Relevant International Conventions and Protocols

Sierra Leone is a party to many international agreements, conventions, and protocols that seek to protect the environment and ensure sustainable development. The following international laws and conventions which Sierra Leone is a signatory are considered applicable to this proposed project:

RAMSAR Convention for the Internationally Important Wetlands Especially as Waterfowl Habitats (1971) - Signed in 1999

Sierra Leone identified and listed one wetland site located along the Sierra Leone River Estuary (SLRE) near Freetown. This non-contiguous wetland is located along the SLRE near Freetown. The site is known to hold on a regular basis at least 1 percent of the biogeography population of at least eight water bird species. The site is also known to hold on a regular basis more than 20,000 water birds. This estuary flanks Freetown to the North and parts of Port Loko District, receiving effluents from factories, offices, and settlements. It is unlikely that the project activities may result in pollution of the estuary, as most of the project sites for Freetown are far away from this site.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal Adopted in 1989 and Came into Force in 1992.

This international treaty was designed to reduce the movements of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less-developed countries. The convention is also intended to minimize the amount and toxicity of wastes generated, to ensure their environmentally sound management. Subcomponents 2 and 3a sub-project implementation groups would strictly adhere to the stipulations of the ESMP, if they are to address small-scale waste management and the handling of hazardous wastes, such as used oil and batteries from machines, generators, and vehicles. Sub-project implementation groups would be required to prepare a site-specific ESMP tailored to the specific requirement of the selected sites and shall ensure that used oil and batteries are handled by a certified firm or supplier.

Stockholm Convention on Persistent Organic Pollutants (May 22, 2001)

This is a global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of humans and wildlife, and have harmful impacts on human health or on the environment. Exposure to persistent organic pollutants (POPs) can lead to serious health effects including certain cancers, birth defects, dysfunctional immune and reproductive systems, greater susceptibility to disease, and damages to the central and peripheral nervous systems.

In response to this global problem, the Stockholm Convention requires its parties to take measures to eliminate or reduce the release of POPs into the environment. The project will clearly follow a WMP to be incorporated into the ESMP. There will be minimal use of plastics bottles and bags and a no-litter policy. The ESMP to be developed will address POPs. It must be ensured that combustion conditions, where applicable, are sufficient to completely oxidize all forms of carbon. The release of variants of biphenyls into the air should be discouraged. No open burning should be conducted in this project.

The Sendai Framework for Disaster Risk Reduction 2015–2030

The Sendai Framework places a strong emphasis on disaster risk management as opposed to disaster management. There is a need for focused action within and across sectors by states at local, national, regional, and global levels in the following four priority areas:

- Priority 1: Understanding disaster risk
- Priority 2: Strengthening disaster risk governance to manage disaster risk
- Priority 3: Investing in disaster risk reduction for resilience
- Priority 4: Enhancing disaster preparedness for effective response and to 'Build Back Better' in recovery, rehabilitation, and reconstruction.

States, regional and international organizations, and other relevant stakeholders should consider the key activities listed under each of these four priorities and should implement them, as appropriate.

The emphasis on disaster risk management as opposed to disaster management must be taken on board in addressing long-term disaster response strategies.

The United Nations Convention on Biological Diversity (CBD) (1992)

The convention requires countries to prepare a national biodiversity strategy (or equivalent instrument) and to ensure that this strategy is mainstreamed into the planning and activities of all those sectors whose activities can have an impact (positive and negative) on biodiversity.

The revised National Biodiversity Strategy and Action Plan (NBSAP 2017–2026) for Sierra Leone has been developed based on national needs and priorities for the implementation of the CBD objectives and Aichi Targets.

The United Nations Framework Convention on Climate Change (New York, 1992)

Preventing 'dangerous' human interference with the climate system is the aim of the United Nations Framework Convention on Climate Change. Sierra Leone is a vulnerable nation to adverse effects of climate change. The project recognizes the cumulative contribution of CO2 emissions from various sources on climate change. If trees are planted through Component 2 sub-project, this is important for climate change mitigation considering their ability to remove CO2 from the atmosphere and act as carbon sinks. There will be net gains from specific project activities that could lead to carbon sequestration. The ESMP to be developed will address climate change mitigation and adaptation strategies to be adopted and implemented by all parties involved in the project, following guidelines provided in the Updated Nationally Determined Contributions (2021) and other climate change instruments.

UN Convention on the Rights of the Child (1990) and ILO Convention 182 (1999)

The conventions define a child as anyone under 18. "Harmful Child Labour consists of the employment of children that is economically exploitative or is likely to be hazardous to, or interfere with, the child's education, or to be harmful to the child's health, or physical, mental, spiritual, moral or social development." Sierra Leone's Child Rights Act, passed in 2007, sets the minimum age for employment. The act also states that children must either be age 15 or have completed basic education (whichever is later) before entering an apprenticeship in either the formal or informal sector. The cut-off age for child labour according to the International Labour Organization (ILO) is 18. Anybody below age 18 shall not participate in the LIPW sub-projects. The contractor shall therefore not employ any persons below the age of 18. The contractors will be required to develop a company policy in line with national and local laws, which prohibits child

labour in the workplace and the workplaces of any suppliers doing business with the contractor. The contractors shall include a clause in their agreement and procurement protocols with their suppliers prohibiting child labour.

Convention Concerning Forced or Compulsory Labour, 1930 (No. 29)
This convention is one of eight fundamental conventions of the ILO. Its objective and purpose are to suppress the use of forced labour in all its forms irrespective of the nature of the work or the sector of activity in which it may be performed. The project has been developed to meet World Bank ESS, which in turn recognize the ILO as the international establishment dealing with forced labour. The contractors will be required to develop a company policy in line with national and local laws, which prohibits forced labour in the workplace and the workplaces of any suppliers doing business with the contractor. The contractors shall include a clause in their agreement and procurement protocols with their suppliers prohibiting forced labour.

Convention on the Rights of Persons with Disabilities (2012)
Parties undertake to ensure and promote the full realization of all human rights and fundamental freedoms for all persons with disabilities without discrimination of any kind based on disability. The contractor will be required to develop a company policy in line with national and local laws, which prohibits discrimination against the disabled. The concerns of disabled and physically challenged persons have been identified through stakeholder meetings for incorporation into the project design. Best practices or GIIPs require that engineering designs make provision for the disabled. The Convention on the Elimination of All Forms of Discrimination against Women (1984).

The convention is often described as an international bill of rights for women. The convention defines discrimination against women as "...any distinction, exclusion or restriction made on the basis of sex which has the effect or purpose of impairing or nullifying the recognition, enjoyment, or exercise by women, irrespective of their marital status, on a basis of equality of men and women, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field." The contractor shall adopt an equal-opportunities policy, starting with employment and subcontracts. The contractor will be required to develop a company policy in line with national and local laws, which prohibits discrimination, of any form, against women.

2.1.2. Applicable World Bank's Environmental and Social Standards (ESS)

The ESF sets out the World Bank's commitment to sustainable development, through a Bank Policy and a set of Environmental and Social Standards (ESS) that are designed to support Borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity. The ESF comprises:

1. A Vision for Sustainable Development, which sets out the Bank's aspirations regarding environmental and social sustainability.
2. The World Bank Environmental and Social Policy for Investment Project Financing, which sets out the mandatory requirements that apply to the Bank; and
3. The Environmental and Social Standards, together with their Annexes, which set out the mandatory requirements that apply to the Borrower and projects.

The World Bank Environmental and Social Policy for Investment Project Financing (IPF) sets out the requirements that the Bank must follow regarding projects it supports through IPF. It also sets

out the policy of the Bank to support borrowers to develop and implement environmentally and socially sustainable projects as well as build capacity in the assessment and management of environmental and social impacts and risks associated with the implementation and operation of projects. The World Bank, as part of the ESF also has environmental and social standards that borrowers must comply with for projects to be sustainable, non-discriminatory, transparent, participatory, environmentally, and socially accountable as well as conform to good international practices. There are ten (10) Environmental and Social Standards (ESS) that establishes the standards that the Borrower and the project will meet through the project life cycle and they are summarized in **Table 2-3**. The Bank requires that all environmental and social risks and impacts of the project be addressed as part of the environmental and social assessment conducted in accordance with ESS1. ESS2–10 set out the obligations of the Borrower in identifying and addressing environmental and social risks and impacts that may require particular attention. These Standards establish objectives and requirements to avoid, minimize, reduce and mitigate risks and impacts, and where significant residual impacts remain, to compensate for or offset such impacts.

Based on the scope of the SL DTP and the proposed subprojects construction and rehabilitation activities, Table 2.3 (Relevant Environmental and Social Standards for SL DTP) summarizes the World Bank ESSs considered to be relevant to the Sub-projects. Eight of the 10 WB ESSs are considered relevant to the project.

There are no Indigenous People in Sierra Leone hence ESS 7 does not apply to the proposed project as well as ESS 9 on Financial Intermediaries.

Table 2-3: Summary of WB Environmental and Social Standards

Standard	Summary of Core Requirements
ESS 1	**Assessment and Management of Environmental and Social Risks and Impacts**
ESS 2	**Labour and Working Condition**
ESS 3	**Resource Efficiency and Pollution Prevention and Management**
ESS 4	**Community Health and Safety**
ESS 5	**Land Acquisition, Restrictions on Land Use and Involuntary Resettlement**
ESS 6	**Biodiversity Conservation and Sustainable Management of Living Natural Resources**
ESS 7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
ESS 8	**Cultural Heritage**
ESS 9	Financial Intermediaries
ESS 10	**Stakeholder Engagement and Information Disclosure**

These ESS relevant to the project are further expatiated hereunder:

ESS1 – Assessment and Management of Environmental and Social Risks and Impacts. ESS 1 sets out the Borrower's responsibilities for assessing, managing, and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing, in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs). Specifically, the objectives of ESS1 are to:

- Identify, evaluate, and manage the environment and social risks and impacts of a Bank financed project in a manner consistent with the Bank's Environmental and Social Standards. ESS1 recommends the following hierarchy in the amelioration of impacts (a) Anticipate and avoid risks and impacts; (b) Where avoidance is not possible, minimize or

reduce risks and impacts to acceptable levels; (d) Once risks and impacts have been minimized or reduced, mitigate; and (e) Where significant residual impacts remain, compensate for, or offset them, where technically and financially feasible.

- To adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and they are not disadvantaged in sharing development benefits and opportunities resulting from the project.
- To utilize national environmental and social institutions, systems, laws, regulations and procedures in the assessment, development, and implementation of projects, whenever appropriate.
- To promote improved environmental and social performance, in ways which recognize and enhance Borrower capacity.

ESS 1 is relevant because sub-project activities under the project are expected to cause some impacts on the environment and these impacts will be mitigated accordingly. This ESMF is prepared for SL DTP & specific mitigation measures developed to meet the requirements of ESS 1. Site-specific ESMPs/ESIAs with mitigation measures is required for any proposed subprojects.

ESS 2 – Labour and Working Conditions. Employment creation, income generation and welfare of labour are the core of ESS2. It recognizes the importance of these in the pursuit of poverty reduction and economic growth. It requires management to treat workers fairly and provide them with safe and healthy working conditions to enhance the development benefits of projects.
The specific objectives of ESS 2 are to:

- Promote safety and health at work.
- Promote the fair treatment, non-discrimination, and equal opportunity of project workers.
- Protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate.
- Prevent the use of all forms of forced labour and child labour.
- Support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law.
- Provide project workers with accessible means to raise workplace concerns.

ESS 2 is applicable to the following categories of labour: people employed or engaged directly by the Borrower (Project staff); people employed or engaged through third parties (contractors, sub-contractors, brokers, agents and intermediaries) to perform work related to core functions of the project, regardless of location; people employed or engaged by the Borrower's primary suppliers (suppliers who, on an ongoing basis, provide directly to the project goods or materials essential for the core functions of the project); and, people employed or engaged in providing community labour. ESS2 applies to people engaged on the project on full-time, part-time, temporary, and seasonal basis as well as migrant workers.

Activities under Component under the proposed project will make use of direct workers, contracted workers, and community workers, thus making ESS 2 relevant to the project. This ESMF is prepared for SL DTP & specific mitigation measures developed. A LMP will be prepared 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 is required for any proposed subprojects.

ESS 3 – Resource Efficiency and Pollution Prevention and Management. ESS 3 sets out the requirements to address resource efficiency and pollution prevention (air, water and land pollution and management arising out of economic activities and urbanization) throughout the project life-cycle consistent with Good International Industry Practice (GIIP). The specific objectives of this ESS are: To promote the sustainable use of resources, including energy, water, and raw materials; To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities; To avoid or minimize project-related emissions of short and long-lived climate pollutants; To avoid or minimize generation of hazardous and non-hazardous waste; and, To minimize and manage the risks and impacts associated with pesticide use. ESS3 enjoins the borrower to consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention measures in accordance with the mitigation hierarchy. The measures are expected to be proportionate to the risks and impacts associated with the project and consistent with GIIP, in the first instance the Environment, Health and Safety Guidelines of the Bank.

Based on the nature of anticipated project activities, the project may result in multiple small and diverse sources of emissions, as well as the generation of e-waste, thus, making ESS 3 relevant to this project. This ESMF is prepared for SL DTP & specific mitigation measures developed. To address ESS3 requirements, the Borrower will prepare, disclose and implement an E-waste Management Plan (EWMP) prior to the implementation of any activity that will have the potential activity that will generate e-waste. The project will also prepare and adopt and implement a Waste Management Plan to manage the risks that will be generated from civil work activities such as laying fiber cables, replacement of microwave links, installing mini towers etc. The WMP will specify procedures for collecting, transporting, recycling and final disposal of these wastes.

ESS 4 – Community Health and Safety. ESS4 addresses the potential health, safety, and security risks and impacts of Bank financed projects (resulting from project activities, equipment, and infrastructure) on project-affected communities. It places a responsibility on the Borrower to avoid or minimize such risks and impacts, with particular attention to people who, because of their circumstances, may be vulnerable. This ESS addresses potential risks and impacts on communities that may be affected by project activities. Occupational health and safety (OHS) requirements for project workers are set out in ESS2. The Borrower will evaluate the risks and impacts of the project on the health and safety of the affected communities during the project life cycle, including those who, because of their circumstances, may be vulnerable. The Borrower will identify risks and impacts and propose mitigation measures in accordance with the mitigation hierarchy.

The specific objectives of ESS4 are to: anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life-cycle from both routine and non-routine circumstances; promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams; avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials; have in place effective measures to address emergency events; ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.

ESS 4 is relevant because of the potential community health and safety issues under subcomponents the project as well as the potential risk for increased gender-based violence (GBV) due to an influx of workers at various project sites. This ESMF is prepared for SL DTP & specific mitigation measures developed. Site-specific ESIAs/ESMPs with mitigation measures is required for any proposed subprojects.

ESS 5: Land Acquisitions, Restrictions on Land Use, and Involuntary Resettlement. ESS5 recognizes that Bank funded projects may result in involuntary resettlement, which, if unmitigated will lead to severe consequent undesirable socio-economic and environmental impacts on project communities. The specific objectives of ESS 5 are to: avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives; avoid forced eviction; mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher; improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure; conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable displaced persons to benefit directly from the project, as the nature of the project may warrant; ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected.

ESS 5 will be applicable because the project activities relating to expansion and upgrade of broadband to rural areas under sub-component 3.2 may be associated with permanent or temporary physical and economic displacement resulting from land acquisition.

ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources. ESS6 recognizes that Bank funded projects could negatively impact on biodiversity and that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development. The specific objectives of this ESS are to: protect and conserve biodiversity and habitats; apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity; promote the sustainable management of living natural resources; support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities.

ESS 6 is relevant because the project is likely to involve small-scale civil works in a rural setting (under sub-component 1.2), only where the project seeks to expand rural last-mile connectivity. This ESMF is prepared for SL DTP & specific mitigation measures developed. Site-specific ESIAs/ESMPs with mitigation measures is required for any proposed subprojects. Biodiversity-related risks and impacts shall be comprehensively assessed and managed as part of the ESIAs/ESMPs to be conducted/implemented in sub-Project sites. Work shall not be carried out in sensitive ecosystems/habitats/species such as protected and designated areas, forests, wetlands, and IUCN listed species to avoid elaborate offsets and project delays.

ESS 8: Cultural Heritage. ESS 8 recognizes the importance of cultural heritage (natural areas with cultural and/or spiritual value such as sacred groves, sacred bodies of water and waterways, sacred mountains, sacred trees, sacred rocks, burial grounds, and sites) as a source of valuable scientific and historical information, as an economic and social asset for development, and as an integral part of people's cultural identity and practice. It provides continuity in tangible and intangible forms between the past, present and future and reflects constantly evolving values, beliefs, knowledge, and traditions. The specific objectives of this ESS are to: protect cultural heritage from the adverse impacts of project activities and support its preservation; address cultural heritage as an integral aspect of sustainable development; promote meaningful consultation with stakeholders regarding cultural heritage; and promote the equitable sharing of benefits from the use of cultural heritage. The requirements of this ESS 8 will apply to all projects that are likely to have risks or impacts on cultural heritage, regardless of whether it has been legally protected or previously identified or disturbed. This will include a project which: Involves excavations, demolition, movement of earth, flooding, or other changes in the physical environment; (b) Is located within a legally protected area or a legally defined buffer zone; (c) Is located in, or in the vicinity of, a recognized cultural heritage site; or (d) Is specifically designed to support the conservation, management, and use of cultural heritage.

ESS 8 is relevant to this project because the support to expand and upgrade broadband network to rural areas under sub-component 1.2 could lead to some physical activities occurring at areas where tangible cultural heritage could be found such archaeological relics, graves, shrines, sacred trees or groves that may require attention of relevant government agencies. This ESMF is prepared for SL DTP & specific chance find procedures developed. Site-specific ESIAs/ESMPs with mitigation measures is required for any proposed subprojects.

ESS 10: Stakeholder Engagement and Information Disclosure. This ESS places premium on open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. The specific objectives ESS 10 are to: establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, especially project affected parties; assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance; promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life-cycle on issues that could potentially affect them; 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; and, provide project-affected parties with accessible and inclusive means to raise issues and grievances, and allow Borrowers to respond to and manage such grievances.

ESS 10 is relevant to the project because of the project will engage diverse stakeholders at the project design, planning and project implementation stages. The Project will be guided by this standard in undertaking all project-related consultations and engagements given that this enhances the environmental and social sustainability of the Project. In line with this, a standalone Stakeholder Engagement Plan (SEP) has been prepared and disclosed prior to project appraisal

2.1.3. World Bank Environment, Health, and Safety (EHS) Guidelines

The World Bank Group (WBG) Environmental, Health, and Safety (EHS) Guidelines (General EHS Guidelines, April 30, 2007) are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). The industry sector EHS guidelines are designed to be used together with the General EHS Guidelines document. The applicable EHS guidelines include the general EHS Guidelines below.

General EHS Guidelines

The General EHS Guidelines (April 30, 2007) provides guidance to users on common EHS issues potentially applicable to all industry sectors. The general guidelines provide GIIP advice relating to the following elements to protect human health and the environment:

Environmental

- Air Emissions and Ambient Air Quality;
- Wastewater and Ambient Water Quality;
- Water Conservation;
- Hazardous Materials Management;
- Waste Management;
- Noise; and
- Contaminated Land.

Occupational Health and Safety

- General Facility Design and Operation;
- Communication and Training;
- Hazards- Physical, Chemical, Biological and Radiological;
- PPE Usage; and
- Monitoring.

Community Health and Safety

- Water Quality and Availability;
- Structural Safety of Project Infrastructure;
- Life and Fire Safety;
- Traffic Safety; and
- Emergency Preparedness and Response.

The WBG General EHS Guidelines are relevant to the proposed project as they provide internationally accepted GIIP for relevant EHS issues. The recommendations contained in the guidelines are to be reviewed during ESIA/ EIA and ESMP/ EMP preparations for sub-projects and will be incorporated into the prescribed management and mitigation measures as appropriate.

2.1.4. World Bank COVID-19 Guidelines

The World Bank COVID-19 guidelines emphasize the importance of careful scenario planning, clear procedures and protocols, management systems, effective communication and coordination and the need for high levels of responsiveness in a changing environment due the COVID 19 pandemic. It recommends assessing current situation of projects, putting in place mitigation measures to avoid or minimize the chances of spread of the virus. Recommendations cover cleaning and waste disposal, medical services, and general hygiene for the workforce together with

management of site entry and exit points, work practices and medical supplies for site workers. The guidelines acknowledge that national and local laws may impose social distancing, restriction on movement and large gatherings as measures to minimize the spread of COVID 19 together with the fact the public may be averse to large gathering as they protect themselves from COVID 19. The Bank further acknowledges that COVID-19 spread, and restrictions can adversely affect the extent to which the project can meet the requirements of ESS10.

Gap Analysis – Comparison Sierra Leone's Regulations/ Policies and World Bank ESF for Handling Environmental and Social Risks

From the above discussions, significant gaps exist between Sierra Leonean national regulations and the applicable World Bank ESSs. These are summarized in **Tables 2-4 & 2-5**. Table 2-5 relates to gap bridging measures for ESS5 only. These gap bridging measures are to ensure compliance with the ESSs.

Table 2-4: Comparison of Sierra Leone's Regulations/ Policies and World Bank ESF for Handling Environmental and Social Risks

Scope/Objective	Description of Bank Policy	Description of 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 environment and social 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 planning and mitigation hierarchy approach.	Environment Protection Agency (EPA) Act (2008) 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 mitigation hierarchy approach, e.g., content wise it does not address impacts on the vulnerable.	• Assistance/compensations will be provided for the affected parties by government through the district and municipal assemblies at various project locations. • The MDA's 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
ESS2: Labour and Working Conditions				
• To promote safety and health at work, fair treatment, non-discrimination, and equal opportunity of project	ESS2 promotes the fair treatment, non-discrimination, and provision of equal opportunities for workers engaged on projects it supports. It strongly encourages protection of all	The Draft Employment and Employed Act (2014) advocates for improved working conditions, including a minimum living wage.	Although the EPA and other structures make provision for anticipated labour-related complaints and	• The project will adopt and enhance an existing transparent GRM which addresses concerns promptly

Scope/Objective	Description of Bank Policy	Description of Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
workers including vulnerable workers such as women, persons with disabilities, children • To prevent the use of all forms of forced labour and child labour. • 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. OHS Hazard identification and right of employees to remove themselves from such workplaces without being punished.	project workers, including vulnerable groups such as women, persons with disabilities, children (of working age) 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 work force (especially the prevention of all forms of forced and child labour), and provision of a grievance mechanism that addresses concerns on the project promptly and uses a transparent process that provides timely feedback to those concerned. 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 which they have reasonable justification to believe presents an imminent and danger to their life or health. Project workers who remove themselves from such situations will not be required to return to work until necessary 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 or removal.	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 healthy 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 commission 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 being retaliated against if they should do so.	• It will also develop labour management procedures e.g., working conditions, occupational health and safety, child labour, etc. (section 5.4). which will guide project implementers in managing labour-related issues. A LMP will be prepared 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 is required for any proposed subprojects. Workers will be sensitized on the LMP and their rights to remove themselves from unsafe workplaces and 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 (2008) 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 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 (e-waste management policy) is still being drafted.	use 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. To address ESS3 requirements, the Borrower will prepare, disclose, and implement an E-waste Management Plan (EWMP) prior to the implementation of any activity that will have the potential activity that will generate e-waste.
ESS4: Community Health and Safety				
• To anticipate and avoid adverse impacts on the health and safety of project affected communities during the project lifecycle from both routine and non-routine circumstances. • To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams. • To ensure that safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to	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 avoids or limits the occurrence of such risks. It provides further requirements or guidelines on managing safety, including the need for projects to undertake safety assessment for each phase of the project, monitor incidents and accidents and preparing 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 2004) revises and consolidates all the laws and regulations pertaining to the prevention of disease, promote, safeguard and maintain and protect the health of human and animals, and to provide for related matters.	The regulation does not consider 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 taken. Project has developed a COVID-19 Response Plan to guide project implementation onsite.

Scope/Objective	Description of Bank Policy	Description of Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
the project-affected communities.				
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 of practices that integrate conservation needs and development priorities.	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 and Wildlife Conservation Act (2015) 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.	Adequate provisions made under national laws and policies.	The project will take measures to protect and conserve biodiversity and habitats and all requirements specified in the ESS6
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 sets out general provisions on cultural heritage preservation and recommends protecting cultural heritage from the adverse impacts of project activities. It 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	The Environmental Policy (1994) provides for collecting data on cultural heritage to further measures for preservation. The Monuments and Relics Act (19062) 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 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 by 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

Scope/Objective	Description of Bank Policy	Description of Government of Sierra Leone Regulation	Gaps Identified	Gap Bridging Actions
• To promote the equitable sharing of benefits from the use of cultural heritage.	resources may be in urban or rural settings, and may be above or below ground, or underwater. It also addresses intangible cultural heritage such as practices, representations, expressions, instruments, objects and cultural spaces that communities recognize as part of their cultural heritage. Projects involving significant 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.
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 with project-affected parties throughout the project life	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 are commenced as early as possible in the project development process and continued throughout the lifecycle of the Project. This allows for stakeholders' views to be	The EPA Act (2008) requires parties seeking permits to implement environmentally sensitive projects to develop an ESHIA and organise public disclosures following procedures that allow stakeholders on 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, has not been developed to fully operationalize 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 the GDAP. • The GRM is a decentralized and transparent system which ensured 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 almost 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 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.			

Table 2-5: Gaps Between Sierra Leone Regulations and WB ESS5 and Measures for Bridging the Gaps

Topic	Sierra Leone Legislation Requirement	WB Requirement	Gaps	Project Actions to Align with International Standards
Resettlement planning and documentation	Development-induced resettlement policy, 2020	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 focus of the resettlement instrument in the Sierra Leonean context is on resettlement of displaced inhabitants. There is no regulation or guideline for the preparation of the land acquisition and resettlement plan.	The project has prepared a Resettlement Policy Framework to guide planning for and documentation of resettlement activities induced by the project.
Consultation	Development-induced resettlement Policy, 2020	Displaced persons and their communities are consulted on resettlement options,	Sierra Leonean legislation does not detail consultation procedures as compared	Consultation procedures throughout project cycle shall be implemented in accordance with ESS 5.

Topic	Sierra Leone Legislation Requirement	WB Requirement	Gaps	Project Actions to Align with International Standards
		resettlement planning and implementation	to ESS 5. The consultation is focused on compulsory land acquisition by the State and is to be undertaken by the Ministry of Lands, Housing, and Country Planning.	
Disclosure	Development-induced resettlement Policy, 2020 EPA Act 2008 (amended in 2010)	Draft resettlement instrument, e.g., RAP, should be submitted for public disclosure purposes	Local laws clearly mention the stakeholders which must be given copies of the land acquisition and resettlement plan document and the consultation report for compulsory land acquisition including displaced persons.	The RAP document shall be disclosed in a format and location accessible to affected persons for a minimum period as required by ESS 5.
Monitoring	Development-induced resettlement Policy, 2020	Displaced persons and their communities are offered opportunities to participate in monitoring resettlement.	A monitoring system to evaluate the implementation of the RAP is required under the policy.	An appropriate monitoring and evaluation system to cover the resettlement activities will be implemented.
Census and Asset Inventory	Development-induced resettlement Policy, 2020	In all cases of resettlement or relocation or displacement, census and asset inventory is required.	The policy focuses on the person or persons with interest in the land.	ESS 5 requirement will be followed
Cut-off Date	Development-induced resettlement Policy, 2020	Cut-off date should be established and disclosed to displaced or affected persons for eligibility.	The laws need to align with the WB ESS 5 requirements to effectively guarantee the rights of all project affected persons.	WB ESS 5 requirement will be followed
Security of Tenure	National Lands Policy, 2015	Requires some security of tenure to displaced persons at resettlement sites.	Not clear on how security of tenure should be treated in	WB ESS 5 requirement will be followed

Topic	Sierra Leone Legislation Requirement	WB Requirement	Gaps	Project Actions to Align with International Standards
			the context of involuntary resettlement	
Replacement Housing / Land	Development-induced resettlement Policy, 2020	Land for land or house for house replacement are options to be considered.	Monetary compensation is the focus where compulsory acquisition of land does not result in displacement of inhabitants	Monetary compensations will be considered first under this project. However, in kind compensations is not ruled out and may be considered as appropriate.
Timing of compensation payment	Development-induced resettlement Policy, 2020	Prior to displacement	Compensation payment could be before or after displacement. It is left open.	Compensation payments will be done prior to displacement (or commencement of civil works on the impacted land) Compensation payment should be timely/ prompt to avoid undue delays
Calculation of compensation	Development-induced resettlement Policy, 2020	Full replacement cost	The market value could be affected by depreciation of the asset.	The Replacement Cost Approach (RCA) will be adopted for the calculation of compensation
Squatters	Development-induced resettlement Policy, 2020	Are to be provided resettlement assistance (but no compensation for land)	Squatters are considered unlawful occupants under Sierra Leonean law and not eligible for any form of compensation	
Owners of Non-permanent Structures	Development-induced resettlement Policy, 2020	For those without formal legal rights to lands or claims to such land or assets that could be recognized under the laws of the country, Bank policy provides for resettlement assistance in lieu of compensation for land, to help improve or at least restore their livelihoods	When the allotted time to remove such properties from the project site expires, the State will forcefully remove such properties from the site and not liable for any damages	Owners of temporary structures shall be provided resettlement assistance (relocation cost and supplemental assistance for reinstatement period) to help improve or at least restore their livelihoods.

Topic	Sierra Leone Legislation Requirement	WB Requirement	Gaps	Project Actions to Align with International Standards
			to such properties or compensation thereof.	
Owners of Permanent Structures	Development-induced resettlement Policy, 2020	Entitled to in-kind compensation or cash compensation at full replacement including labour and relocation expenses, prior to displacement.	The State will destroy any such unlawful permanent structures from the site and not responsible for any liability thereof. No assistance or compensation is given to owners of unlawful permanent structures.	Owners of permanent structures shall be paid cash compensation at the full replacement cost (including labor and relocation expenses) without consideration for depreciation (as if new) prior to displacement
Resettlement	Development-induced resettlement Policy, 2020	Affected people who are physically displaced are to be provided with residential housing, or housing sites, or, as required, agricultural sites at least equivalent to the old site. Preference to be given to land-based resettlement for displaced persons whose livelihoods are land- based	No major gaps for physical displacement provisions. However, additional resettlement assistance is not specifically and directly mentioned in Sierra Leonean law.	Physically displaced PAPs are to be provided with housing sites at least equivalent to the old site. Preference to be given to land- based resettlement for displaced persons whose livelihoods are land-based (i.e., farmers, etc.). Periodic monitoring is required during project life to ensure that the PAPs have adjusted to their new environment
Resettlement assistance	Development-induced resettlement Policy, 2020	Affected people are to be offered support after displacement, for a transition period	Not specifically and directly mentioned.	Affected people will be offered resettlement support to cover a transition period. For example, psycho-social counselling could be provided for PAPs to help them accept the changes
Vulnerable groups	Development-induced resettlement Policy, 2020 National Social Protection Policy, 2011	Particular attention to be paid to vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children	Supplementary assistance is offered to vulnerable persons that cannot accomplish resettlement and related tasks. Assistance is	Particular attention to be paid to vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children

Topic	Sierra Leone Legislation Requirement	WB Requirement	Gaps	Project Actions to Align with International Standards
			offered to all categories of vulnerable persons in such circumstances under the social protection policy	
Improve or Restore Conditions / Livelihoods and Provide Associated Transitional Support	Development-induced resettlement Policy, 2020	Livelihoods and living standards are to be restored in real terms to pre- displacement levels or better.	The policy provides guidance on how the State should take cognizance of the economic well-being of displaced persons. However, it is not clear if livelihoods are to be restored or improved upon.	The project will implement a livelihood restoration and assistance program to help restore the livelihoods and living standards of PAPs in real terms to pre-displacement levels or better
Information and consultation	Development-induced resettlement Policy, 2020 EPA Act 2008 (amended in 2010)	Displaced persons and their communities are provided timely and relevant information, consulted on resettlement options, and offered opportunities to participate in planning, implementing, and monitoring resettlement	Existing policies make public information and consultation a mandatory element in the resettlement process	Displaced persons and their communities will receive timely and relevant information, consulted on resettlement options, and offered opportunities to participate in planning, implementing, and monitoring resettlement
Grievance	Development-induced resettlement Policy, 2020	Appropriate and accessible grievance mechanisms to be established.	The establishment and operation of a grievance redress mechanism is a requirement under the policy.	Appropriate and accessible grievance mechanisms will be established. The GRM will be accessible, reliable and transparent

3. ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS OF SIERRA LEONE

This Section describes the environmental and social baseline conditions in the country relevant this project to provide additional context.

3.1. General

Sierra Leone has four main physical regions: the raised beaches and hills along the Freetown Peninsula, the Coastal Plains, the Interior Lowlands, and the Interior Plateau. The Freetown peninsula consists of three roughly parallel ranges of highlands that are narrow but extend about 30km south of Freetown. The hills and mountains in these highlands rise impressively from 200 to 1000m above the low-lying narrow coastal area. The Interior Lowlands make up about half of the country. Most of the area, which is largely swamp, is less than 150m above sea level. The Interior Plateau makes up the eastern half of the country. It is the most extensive physical region and includes the greatest variety of landforms. It is 300 to 450m above sea level. The Interior Plateau is dissected by the main rivers flowing westward towards the sea. Rising above the general level of this region are several hills and mountains, including the Kambui, Nimini, and Gori hills and the Sula, Kangari, Loma, Tingi, and Wara mountains. The country has 16 districts and 190 chiefdoms (see Figure 5-1).

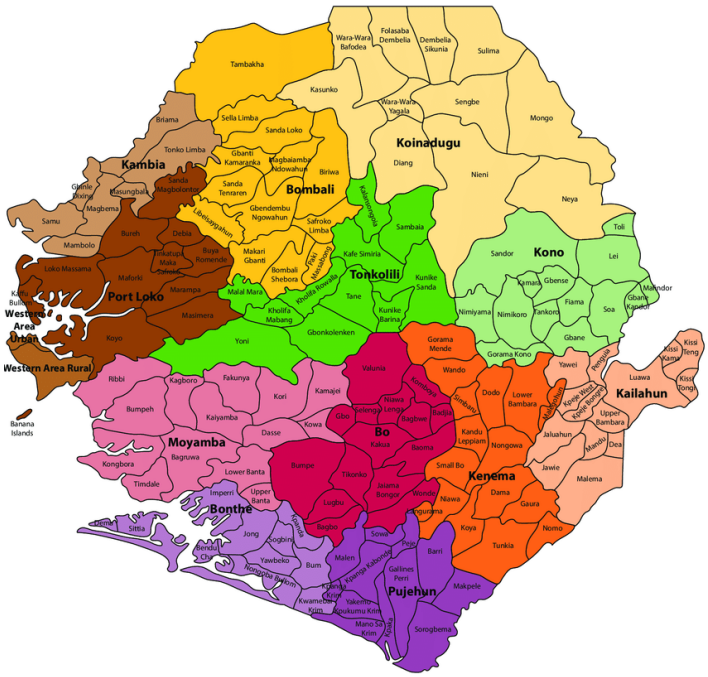


Figure 3-1: Political Map of Sierra Leone with Districts and Chiefdoms

3.2. Physical Environment

3.2.1. Climatic Conditions

The mean long-term wind regime over Sierra Leone is influenced by the distribution of atmospheric pressure over the tropical zone of the Atlantic Ocean in spring and in autumn respectively due to two major atmospheric high-pressure systems: the St. Helena or South Atlantic

Maximum and the Azores or North Atlantic Maximum. The equatorial atmospheric depression between these two high pressure systems exerts a less prominent influence on the wind regime over Sierra Leone. Local changes in atmospheric pressure resulting from temperature differences between land and the adjacent ocean as well as to orographic and land cover differences exert local changes in wind patterns on a diurnal and other short-term period.

There are two main distinct seasons in Sierra Leone, and these are the dry and rainy seasons. The dry season is usually from December to April and is dominated by the North-East Trade Winds, commonly referred to as the Harmattan. The rainy season is usually from May to November and is dominated by the Southwest Monsoon Winds. The northeast trade winds are relatively cool and humid. In May to November, the winds are unstable in terms of direction and from June to October, Southwest monsoon winds dominate. The rainy or wet season generally lasting from May to November has two periods of squally weather, i.e., March-May, and September-October.
Sierra Leone has a predominantly hot and humid tropical climate that shows a distinct coast-interior gradient, a function of the country's varied topography. The wet season has an average rainfall of 3,000 mm, with coastal and southern areas receiving up to 5,000 mm annually and inland areas between 2,000 mm and 2,500 mm. The national average annual rainfall varies across the country: 3,659 mm in Bonthe in the south, 2,979 mm in Lungi in the west, and 2,618 mm in Kabala and Bo (UNDP 2012). Temperatures are high and humidity is low in the dry season. The lowest temperatures are from July to September, in the middle of the rainy season, and the highest temperatures are in February and March, near the end of the dry season.
The most frequent wind directions are from northwest and southwest with speeds of 0.1–2.3 m/s on average.

Cloudiness and Rainfall

During the rainy season, clouds of vertical development of 8-10% generally prevail every day and these are usually accompanied by rainfall. The highest observed cloudiness from the area 6-7 and are closely related to the influence of the equatorial monsoons blowing from June to November. The cloud amount decreases to 3-5 a month during the months of December to April.

The highest amount of rainfall occurs during the rainy season, which lasts from May to November. The heaviest rains occur in July and August. The mean monthly amount of rainfall reaches its maximum in July and August, when the average number of rainy days is 27.

Temperature

Historically, the normal temperature range for Freetown is between 22.1^{o}C and 32^{o}C, with temperatures known to drop during the Harmattan season to as low as 10^{o}C. Relative humidity level in the mornings is typically between 78.1 and 91.1 percent and in the afternoons between 62.4 and 82.8 percent, with low values occurring between January and March. In recent times, the mean long-term air temperature regime shows an average monthly temperature of between 26-28oC from June to October, with a maximum temperature of 32oC. Temperatures of up to 36oC have also been recorded especially during the month of March. A minimum temperature of 20oC has also been recorded.

Humidity and Mist

Air humidity according to monthly means can be as high as 80-90% during dry season and decreased to 70-80% during the rest of the year. The mean monthly occurrence of mist is approximately 1%. The visibility is obstructed by haze, the frequency of occurrence of which increases from 25% to 40% during the period from December to May. Its frequency from June to September is 3-5%. From December to February (Northern Winter), mist occurrence in the area increase to almost 2% a month.

3.2.2. Topography and Landscape

Forest/Vegetation

The six (6) major ecosystems are: Forest, Montane, Savanna, Agricultural, Wetland, Freshwater and coastal and marine. Each of the ecosystems is characterized by certain dominant vegetation and wildlife. Savanna vegetation, comprising grasses and bushes, dominates northern Sierra Leone. Forests are densest in the southeast and contain varieties of palm and, to a lesser extent, mahogany, and teak.

The level of deforestation in the Sierra Leone coastal area is high. Forests are cleared for various purposes, which include agriculture, fish drying, commercial logging, building, refurbishment and urbanization. Deforestation is severe in the watersheds of the Scarcies, Rokel, Ribbi and Sherbro rivers as well as in the areas of Yawri bay and Bunce River environs.

Soils

No extensive and intensive soil survey has yet been fully carried out in Sierra Leone though various efforts have been made in particularly localized areas to analyse the soil types of the country. Except for those in the swamps and valleys, the soils elsewhere in the coastal zone are found to be light and penetrable. They are acidic, lateritic, and low in potassium content. Characteristic of these soils is the prevalence of lateritic hard pans. Along the riverbanks and flood plains and in the tidal estuaries are found deposits of rich alluvial soils very suitable for rice cultivation.

3.2.3. Vegetation Zones

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 economy depends majorly on agriculture and mining, with the bulk of the population engaged in subsistence farming. Commercial farming is significant only in the coastal region where rice, the staple food crop of Sierra Leone, is produced in large quantities.

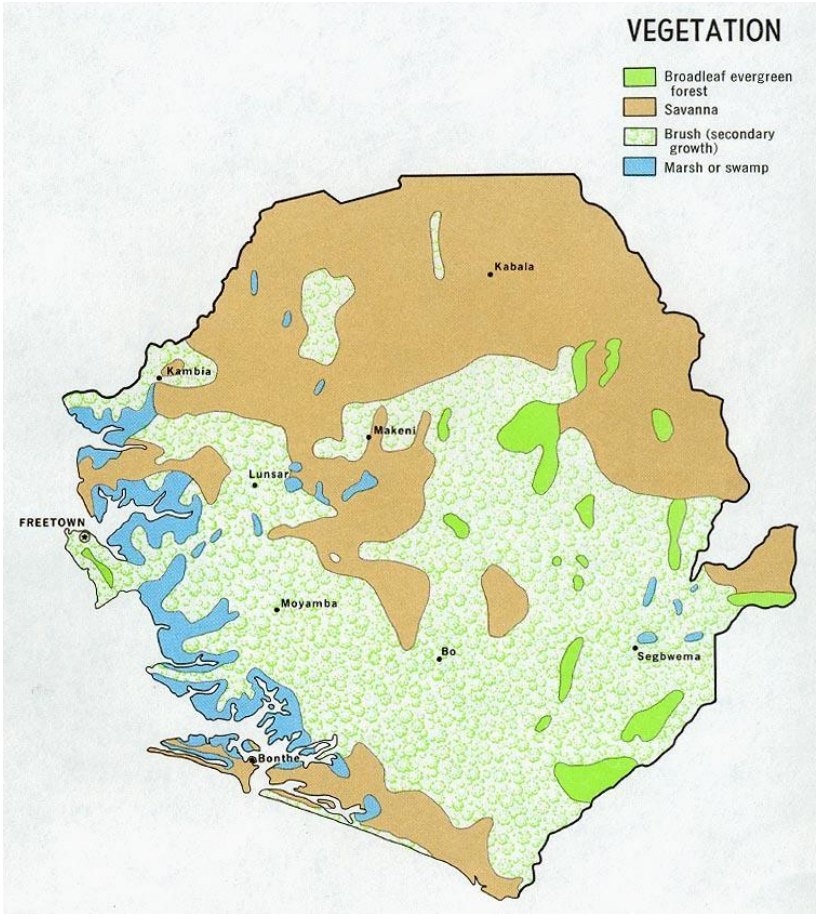


Figure 3-2: The Vegetation of Sierra Leone

3.2.4. Water Resources

The Sierra Leone coastal area can be divided into four main hydrological areas (Johnson & Johnson, 2004). These are the Scarcies River, Sierra Leone River, Sherbro River and the Gallinas and Mano Rivers hydrological areas.

i. **The Scarcies River Hydrological Area:** The river is tidal and during the rainy season rises about 2.7m. The wide estuary mouth has mud banks and sand bars forming Yelibuya and Kortimaw islands. Further inland, it splits into the Great and Little Scarcies rivers which are relatively narrow and lined with mangroves.

ii. **Sierra Leone River Hydrological Area:** The main rivers entering this hydrological area are the Rokel, Port Loko creek and Kumrabe creek.

iii. **Sherbro River Hydrological Area:** Three major river systems, the Taia, Sewa, and Wange rivers enter the Sherbro River Estuary through a complex system of brackish water channels draining an extensive area behind the ancient beach ridges in the southeast region. The water divides around Sherbro Island and flows west into Yawri Bay and south along Turner's Peninsula.

iv. **Gallinas and Mano Rivers Hydrological Area:** The Mano River divides Sierra Leone from Liberia and drains a large catchment area in the south. The stronger surf and currents have formed an 8km spit between the open sea and the narrow lagoon fed by the rivers.

3.2.5. Socio-economic Environment

Overview of economy

According to the results of the 2004 Sierra Leone Population and Housing Census, the population of Sierra Leone is estimated at about 4.9 million in an estimated 819,854 households. For the period 1985-2004, the population growth rate was estimated at 1.8 percent. About 64 percent of the population resides in rural areas.

Sierra Leone was ranked last among the 177 countries surveyed globally in the 2007/2008 United Nations Human Development Index, with a per capita GDP of about US$806, a life expectancy of 41.8 years, and an adult literacy rate of 34.8 percent. The UNDP 2007/2008 Human Development Report estimates that in 2005 about 52 percent of the population lived on less than US$1 a day (UNDP, 2007). The most recent household income and expenditure survey (2003-04) showed that about 70 percent of the population lives below the poverty line according to the National Poverty Line of Le 2,111 per day (SSL,2004).

Overall, poverty is highest in rural areas, with 79 percent of the rural population living below the poverty line. The most acute form of poverty, insufficient food, is concentrated mainly in rural areas. About 68 percent of the population cannot afford enough food to eat. Three out of four people (75 percent) in rural areas outside Freetown do not attain the minimum daily calorie intake (2700 calories). The poor in Sierra Leone can meet only about 71 percent of their basic needs.

The civil war resulted in a substantial reduction in the standard of living and, for many people, reduced access to food. A poor and undernourished population is more susceptible to various diseases. Thus, rising maternal and child mortality rates, increasing rates of illiteracy, and rising unemployment levels characterize the living conditions in many parts of Sierra Leone. The HIV/AIDS pandemic has also had a major impact on all sectors of the economy through loss of production and labour force. Against this background, the government of Sierra Leone in 2005 launched the Economic Recovery Strategy, aimed at restoring economic growth, generating employment opportunities, and reducing poverty levels (Poverty Reduction Strategy Paper, March 2005).

Population

The current population of Sierra Leone is 8,264,042 based on projections of the latest United Nations data. The growth rate in Sierra Leone has been above average throughout its history, and the steady increase in population is still going on today and the annual rate of change has been over 2% since around the turn of the century. The median age in Sierra Leone is 18.5 years, which is disproportionately young and makes for a very young working population. The average woman gives birth to roughly 4.5 children, and this high birth rate is the cause of the substantial population growth rate in the country.

The annual growth rate in the country is not expected to remain over 2% for much longer. Current projections suggest that the rate of growth will peak at 2.14% in 2020 before declining towards 1.22% by the year 2050, a drastic drop. The population numbers will still change drastically during this time, however. The same set of predictions state that the population of Sierra Leone will be 8,046,931 in 2020, 9,719,531 in 2030, 11,403,087 in 2040 and 12,971,626 by the year 2050.

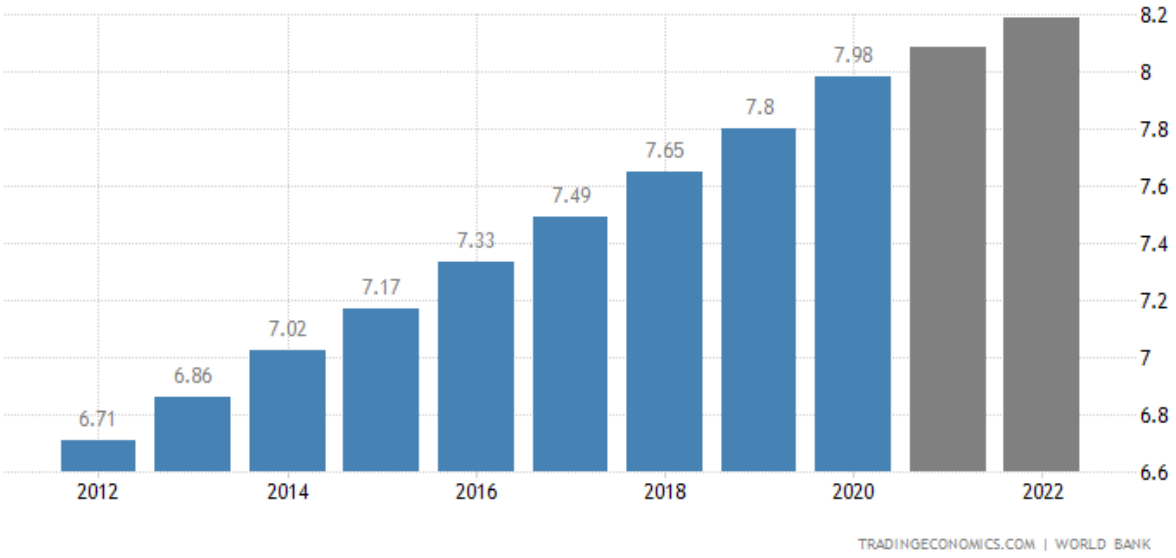


Figure 3-3: Population Distribution of Sierra Leone
Source: United Nations Data (World Population Review) and World Bank (TradingEconomic.com)

Land ownership

Land can be owned from the following categories in Sierra Leone: Private land, state land, communal land, and family land. State land and private landownership operate in the Western Area. In the provinces, communal and family land ownership is prevalent. State or public lands are mostly unoccupied land, and land compulsorily acquired by the Government. Private land is land in which an individual has a freehold interest. Communal land referred to as chiefdom or community land is held in trust by the chief for the community and in the case of family land the main interest is vested in the family group with a common ancestry. In the provinces private freehold is gaining ground in the urban centres. Most chieftaincy land is held by extended families who have rights of access, use, and transfer by lease.

3.2.6. Gender Based Violence (GBV) in Sierra Leone

Although gender-based violence (GBV) is a global problem, recent research in West Africa suggests that this problem becomes particularly acute in post-conflict countries. It is widely estimated that during Sierra Leone's civil war from 1991-2002, up to 250,000 women and girls were victims of GBV. Rape was used systematically by all factions and, although peace was declared in 2002, the trauma of war has left scars which run through the fabric of households, families, and communities.

In the urban areas, about 70 percent of the population is self-employed and largely engaged in petty trading in the informal sector. Many of the women, and men, involved in informal trading do so on a hand-to-mouth basis to sustain the welfare and basic consumption needs of their households. More men have access to paid jobs, while women tend to occupy less well-remunerated enterprises within the informal sector. In Sierra Leone, 12.4 percent of parliamentary seats are held by women, and 19.2 percent of adult women have reached at least a secondary level of education compared to 32.3 percent of their male counterparts. In the urban slum setting in Freetown, mostly along the coastline, cross-border trade is an important source of livelihood support, with 63 percent of urban women engaged in informal economic activities, mostly petty

trading, and farming (Howard 2016). These disparities result from cultural and social barriers that discriminate against women's full socioeconomic participation (African Development Bank 2016).

GBV in Sierra Leone is a persistent problem which studies have shown to affect nearly all Sierra Leonean women who experience it in one form or another during their lifetime. According to the Sierra Leone Demographic and Health Survey 2019, 61 percent of women aged 15–49 have experienced physical violence since age 15, and 7 percent have experienced sexual violence. When it comes to intimate partner violence (IPV), 62 percent of ever married women have, at least once in their lifetime, experienced physical, sexual, or emotional violence (SSL and ICF International 2020). The violence takes various forms including domestic (physical, economic, and emotional/psychological), communal/cultural, sexual, and structural (equal rights discrimination), with domestic violence being the most common.

Sierra Leone is also a highly patriarchal society, and institutionalized gender inequalities are exacerbated by discriminatory behaviours, particularly with relation to marriage, property rights, and sexual offences. The high levels of illiteracy and poverty among Sierra Leonean women prevent them from upholding many of their internationally recognized rights. Similarly, economic insecurity contributes to women's vulnerability to GBV, and their marginalization from local and national decision-making processes further limits their ability to redress these gender inequalities. With the onset of the COVID-19 pandemic, it was feared that the rates of GBV, which were already unacceptably high in Sierra Leone, would be exacerbated.

3.2.7. Other Vulnerable Groups

According to the 2018 Integrated Housing Survey, 162,208 persons with disability are within the working ages of 15–64 years. Of this population, a total of 93,843 (57.8 percent) persons were employed the last week preceding the survey. Of the 57.8 percent, 74.4 percent are self-employed, and 15 percent are engaged in help without pay in households or businesses. Only 6.7 percent are regular employees. Child labour is common in Sierra Leone as children living in the poorest households in Freetown and other major cities are most often forced into providing labour. Many children living in Freetown are used as hawkers, spending long hours selling various items and pulling wheelbarrows, instead of being at school. This is in contravention of the ILO Convention 182 which prohibits the use of child labour. Street trading in the city of Freetown is a very serious problem.

According to the UNDP, approximately 2.7 million Sierra Leoneans are youth aged 15−35 years. The unemployment rate is higher among youth than those aged 35 and above. A lack of skills and experience is cited as one of the main reasons for the high youth unemployment rate. An ILO survey (SWTS Country brief, Sierra Leone. ILO, January 2017) registered a high youth labour underutilization rate, particularly among young women: it was 72.8 percent for young women and 59.9 percent for young men. The share of underutilized labour potential consisted of 48.5 percent of the youth population in irregular employment (either in self-employment or paid employment with contract duration less than 12 months), 11.8 percent unemployed, and 5.9 percent inactive non-students. More than three in four (78.5 percent) employed youth remain in vulnerable employment as own account workers (34.6 percent) or unpaid family workers (43.7 percent).

3.2.8. Collection, Treatment, and Disposal of e-Waste

Sierra Leone is at an infant stage of developing necessary management strategies, standards, and policies to reduce the adverse health and environmental effects of e-waste. Although the Basel Convention on the Control of Trans boundary Movements of Hazardous Wastes and their Disposal has been adopted, there is no national policy to guide or manage e-waste in the country. There are also no e-waste recycling facilities, no battery recycling facilities, and no attempt to manage the e-waste that burdens the country. This has resulted in the lack of appropriate handling of wastes, from lack of separation at source to insufficient or obsolete treatment facilities. The EPA has drafted an E-waste Management Policy that will propose measures for regulating the generation, disposal, and management of electronic and other hazardous wastes.

Internet Usage

The average value for Sierra Leone during the period 1990-2019 was 2.67 percent with a minimum of 0 percent in 1990 and a maximum of 16.8 percent in 2019. The latest value from 2019 is 16.8 percent. *(Source: World Bank)*. Internet penetration in Sierra Leone stood at 29.7% in January 2021. This number has grown to 2.39 million internet users in Sierra Leone since 2020. The number of internet users in Sierra Leone increased by 399 thousand (+20%) between 2020 and 2021.

4. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACT IDENTIFICATION

4.1. Project Influence

In the absence of site-specific detailed project designs including infrastructure locations and layouts, the ESMF describes in general terms the potential environmental and social impacts and their respective management options based on the general project design concepts. The SL DTP will have positive and potential negative social, economic, and environmental impacts at different phases if the project cycle.

Geographical Area of Influence

The geographical area of influence will be the selected location areas to benefit from the proposed project and the country. The immediate geographical area of influence in the project areas will be mainly the right of ways, under the jurisdiction of the Sierra Leone Roads Authority (SLRA) where fibre optic network and cable laying may be required. In addition, cell sites at specific locations may be influenced.

Environmentally Sensitive Areas to be influenced

A preliminary assessment of potential project sites in line with the EPA Act (2008), amended in 2010, concerning Environmentally Sensitive Areas indicates that no environmentally sensitive areas are likely to be affected by the proposed project. Thus, no environmentally sensitive areas will be utilised by SL DTP.

Community Influence and Vulnerable Groups

The main communities likely to be affected by SL DTP are low-income areas in Sierra Leone. Vulnerable groups are those at risk of becoming more vulnerable due to impacts from project implementation involving deployment of new ICT equipment and other works. These vulnerable people include, but not limited to:

- Persons with Disability (PwDs), whether mentally or physically;
- Elderly people, usually from 70 years and above;
- Very sick and or physically weak individuals; and
- Children.

4.2. Project Activities of Environmental and Social Concern

Interactions between project activities and environmental and social receptors are identified for analysis. Potential interactions are evaluated against site-specific conditions using information gathered from existing baseline conditions and previous site observations. Interactions/project phase activities are ‘screened out’ if the potential for impact does not exist or is negligible.

For purpose of this ESMF, the proposed activities and identified impacts that are likely to be associated with the SL DTP subprojects have been classified under three (3) phases of the project lifespan. The phases include:

i) Planning and design stage activities
ii) Preconstruction phase
iii) Construction phase
iv) Operational and Maintenance phase

Planning and Design stage activities

Engagement of project staff and consultants
Site identification and location
E&S screening
Project targeting and estimation of beneficiaries
consideration of differentiated treatment for groups of higher sensitivity or vulnerable

Preconstruction Phase Activities

Preliminary activities to be carried out prior to the implementation of the proposed project include:

- Permit and license acquisition.
- Survey works to determine the Right-of-Way (RoW) and other suitable installation sites;
- Land acquisition; and
- Consultations with relevant stakeholders.

Constructional Phase Activities

Constructional phase activities include among others:

- Site clearing (where necessary);
- Excavation grading, compaction, filling and other civil works;
- Installation works;
- Laying of cables and fibre network system;
- Disposal of construction waste and debris etc.;
- Transportation of materials and equipment to project sites
- Occupational Health and Safety (OHS) issues;
- Community health and safety issues such as road safety
- Social issues such as labor influx, GBV/SEA risks, gender issue
- Labor and Working condition
- Cultural heritage issues

Operational Phase Activities

- Technical Assistance activities
- Waste-management

4.3. Determination of Environmental/Social Significance of Potential Risks and Impacts

The actual impact significance rating depends on many factors, including:

- the magnitude of the impact;
- the sensitivity and value of the resource or receptor affected;

- compliance with relevant laws, regulations and standards;
- views and concerns of stakeholders;
- overall worker/public comfort; and
- likelihood of occurrence.

Based on the project specifics, the key environmental and social aspects that should be considered for the impact assessment include:

Physical Environment

- Effects on the runoff by inappropriate disposal of solid wastes and garbage
- Effects on the natural waters by inappropriate disposal of solid wastes and garbage
- Effects on water quality by inappropriate disposal of solid wastes and garbage
- Effects on air quality by infrastructure construction
- Effects on air quality by particulate increased traffic and emissions by machinery and vehicles
- Effects on air quality by wastes and effluents
- Effects on soils by wastes and effluents
- Effects on soils by construction of infrastructure
- Effects on environmental quality by increase noise levels during infrastructure construction
- Effects on environmental quality by increase noise levels by increase traffic and personnel

Biological Environment

- Effects on flora by inadequate disposition of wastes and effluents
- Effects on fauna by inadequate disposition of wastes and effluents
- Effects on habitats by inadequate disposition of wastes and effluents

Social and Economic Environment

- Effects and changes on regional demographics
- Effects and changes on job generation and employment
- Changes in quality of life due to the increase economical activities
- Changes in quality of life due to the increase mobility, transport, and job in the region
- Alterations on the regional demography
- Labour conflicts due to job expectations
- Effect on health and safety in the stakeholder's communities due to changes in lifestyles

4.4. Criteria of Impact Evaluation

Duration of the Impact

The duration of impact may be described as follows:

- A temporary impact can last days, weeks or months, but must be associated with the notion of reversibility.
- A permanent impact is often irreversible. It is observed permanently or may last for a very long term.

Extent of the Impact

The extent of the impact may be described as follows:

- The extent is regional if an impact on a component is felt over a vast territory or affects a large portion of its population.
- The extent is local if the impact is felt on a limited portion of the zone of the proposed project or by a small group of its population.
- The extent is site-specific if the impact is felt in a small and well-defined space or by only some individuals.

Intensity of the Impact

The intensity of the impact may be described as follows:

- The intensity of an impact is qualified as strong when it is linked to very significant modifications of a component.
- An impact is considered of average intensity when it generates perceptible disturbance in the use of a component or of its characteristics, but not in a way to reduce them completely and are irreversible.
- A weak intensity is associated with an impact generating only weak modifications to the component considered, without putting at risk some of its utilization or its characteristics.

Impact Severity

A description of the impact severity may include the following:

- A 'negligible or nil impact' or an impact of negligible significance is where a resource or receptor will not be affected in any way by a particular activity, or the predicted effect is deemed to be imperceptible or is indistinguishable from natural background levels.
- A 'minor impact' or an impact of minor significance is one where an effect will be experienced, but the impact magnitude is sufficiently small and well within accepted standards, and/or the receptor is of low sensitivity/value. In such instances, standard construction/ operational practices can address such impacts.
- A 'moderate impact' or an impact of moderate significance is where an effect will be within acceptable limits and standards. Moderate impacts may cover a broad range, from a threshold below which the impact is minor, up to a level that might be just short of breaching an established (legal) limit. In such cases, standard construction practices can take care of these impacts, but mitigation measures may also be required.
- A 'major impact' or an impact of major significance is one where an accepted limit or standard may be exceeded, or large magnitude impacts occur to highly valued/sensitive resource/receptors. In such cases, alternatives are required to address such impacts otherwise mitigation measures should be adopted with strict monitoring protocols.

The above classification is largely subjective and may be overruled by new site-specific issues or information and detailed project activities not captured in this framework.

4.5. Potential Positive Impacts

The significant positive impacts of SL DTP are outlined as follows:

i. **Increased Effectiveness of Online Communication:** The most beneficial impact will be at the human and social level and will be related to advanced, cost-effective online communication because of the implementation of SL DTP.

ii. **Improved Safety and Security of Citizens:** Safety and security within the country will be improved through increased institutional collaboration resulting in less crimes. Improved response to disasters and other emergencies through effective communication will also help preserve the life, health, and property of citizens.

iii. **Employment Creation and Boost in Economic Activities:** Jobs will be created for both skilled and unskilled labour during the construction and operational phases of the project. Activities of vendors, who will be attracted by the presence of workers during construction, is expected to increase and bring income to these vendors who are mostly locals. Landowners and the relevant traditional councils will equally benefit through rent mobilization or land acquisition.

4.6. Potential Negative Impacts

Potential Preparatory Phase Adverse Impacts

The potential preparatory phase adverse impacts are provided in **Table 4-1**.

Table 4-1: Potential Planning and Design Phase Adverse Impacts

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
1	Recruitment of project workers/ consultants	Discrimination in recruitment process Poor and undocumented terms of employment especially for casual labour Sexual exploitation and Abuse due to search employment and training opportunities under the project by female for job opportunities.	Local	temporal	average	Moderate
2	Selection of individuals/ beneficiaries for ICT training	Lack of clear criteria for selection of beneficiary can lead to elite capture and potential for risk of sexual exploitation and Abuse. The absence of clear guidelines, content and selection criteria for the various support packages and training programmes can youth, women, and persons with disabilities and people in hard-to-reach communities may experience barriers to accessing project benefits	Site specific	temporal	average	Moderate
3	Site selection for works	Lack of or poor environmental and social screening of proposed sub projects such as last mile connectivity and rural access connectivity can lead to siting and laying of fibre optic cable in sensitive areas . Dispute over selection of public institutions for internet connectivity may arise without proper selection criteria.	Local	temporal	average	Moderate

Table 4-2: Potential Pre-construction Phase Adverse Impacts

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
1.	Permanent or temporary physical and economic displacement resulting from land acquisition	Individuals across sites identified for field operations may be at risk of physical and/or economic displacement.	Site-specific	Temporary / permanent	Average	Moderate
2.	Occupational Health & Safety (OHS) issues	Workers/personnel may be at risk of accidents and injury during survey works to determine suitable locations for project facilities, especially within the RoW of highways, urban and feeder roads.	Site-specific	Temporary	Strong	Moderate
3.	Unwillingness/ disputes over land	Potential disputes among various landowners may occur over ownership of land required for fibre network. Some landowners may not be willing to release their lands for trenching and excavations.	Site-specific	Temporary / Permanent	Average	Moderate
4.	Damage to property	Permanent structures along RoWs include pavements and concreted entrances to shops. Sections of these structures within the fibre network to be extended will be affected. Other properties within the right of way are usually temporary moveable structures such as kiosks, containers, tables and will not be damaged.	Site-specific	Temporary	Average	Major

Potential Construction Phase Adverse Impacts

The potential constructional phase adverse impacts are provided in **Table 4-3.**

Table 4-3: Potential Constructional Phase Adverse Impacts

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
1.	Loss of vegetative cover and impacts on flora and fauna	Vegetation clearance during trenching for the fibre network and installation of other equipment may result in loss of flora and disturbance of fauna at the construction sites. The project sites are mainly within the RoW of highways, urban and feeder roads. In urban centres, most of these sites are paved and have no vegetation and fauna. In the peri-urban and rural areas where there is vegetation, preliminary field studies show that these are common regenerated vegetation, hence the proposed project will not result in the loss of any species of conservation value. Vegetation will be restored through re-growth after construction works.	Site-specific	Temporary	Weak	Minor

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
2.	Impacts to soil and sediment transport	Vegetation clearance, trenching and excavation for fire network and installation of other equipment will expose and loosen up the topsoil, which may result in soil and sediment transport through erosion. There may also be contamination of the topsoil through fuels, oils, and waste due to accidental spillage or negligence.	Local	Temporary	Average	Moderate
3.	Generation and disposal of solid waste	Piles of soil from trenching and excavation works will form the bulk of waste produced during construction works. These will be reused for backfilling. Concrete debris may also be generated from trenching at paved/ concreted areas. Other waste that may be generated will include used polythene bags and drinking water sachets from the workers.	Site-specific	Temporary	Strong	Moderate
4.	Occupational Health & Safety (OHS) issues	Construction workers will be at risk of accidents and injury from: • working along RoWs of highways, urban and feeder roads; • use of machinery and equipment; and • workers will also be exposed to dust, noise and exhaust fumes from working along RoWs; • exposure to works at height; and • exposure to hazardous waste during demolition and waste handling.	Site-specific	Temporary /Permanent	Strong	Major
5.	Community Health and Safety	<u>Public Safety</u> Poor management of construction activities may result in stagnant water in uncovered trenches for the fibre network extension. Unsecured excavations may also compromise public safety. Also, there is high potential for spread of COVID-19 among workers and the communities. <u>Road Traffic Impacts</u> Construction activities along access roads and potential road cutting may cause traffic congestion if not managed properly. The effect of traffic disruptions includes increased travel time, congestion, social stress, and agitations. <u>Spread of Sexually Transmitted Diseases (STDs)</u> Construction workers may interact with community members which may lead to irresponsible sexual behaviour and promiscuity. This may lead to the spread of sexually transmitted diseases. Females within the communities, schools, and health facilities, where ICT infrastructure and installation of equipment will be undertaken can become survivors of GBV/SEA/SH.	Local	Temporary/ permanent	Strong	Major

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
6.	Sanitation and hygiene	Poor housekeeping at construction sites and improper disposal of waste (construction waste, polythene bags, leftover food, food packaging, drink cans, water sachet etc) will create sanitation problems.	Local	Temporary	Average	Moderate
7.	Impacts from visual intrusion	Trenching, excavation, and installation works, as well as the presence of construction workers may alter the landscape character and the scenic view.	Local	Temporary	Weak	Minor
8.	Dust noise and Vibration from construction activities	Dust generation from trenching and excavations may temporarily affect the air quality in areas close to the construction sites. Noise levels at construction sites are also expected to increase intermittently through the operation of concrete mixing machines, vehicular movement, and interaction of workers. Damages of structures over time because of the vibration caused by the heavy machinery.	Local	Temporary	Average	Moderate
9.	Disruption of utility service	Utility services may be disrupted through damage to utility lines and existing telecommunication lines within the RoW, especially during trenching for the fibre network extension and during excavation works.	Local	Temporary	Average	Moderate
10.	Fire risks	Fibre optic cables are not flammable and not highly combustible and may not pose any fire hazard as they do not conduct electricity. Fire risks during the construction stage may however be associated with uncontrolled fires from external sources such as from the activities of the public close to the work area and the use of faulty machines and equipment. Any uncontrolled fire within the construction zone may result in damage to equipment and the existing fibre cables.	Local	Temporary	Weak	Minor
11.	Grievance/ public agitation	Trenching through private property (pavements/concreted entrances) and temporary movement of kiosks, tables, containers, obstruction of access to homes, shops etc. along the RoW could result in conflicts and agitations from affected persons if not managed properly. Traffic disruptions may also result in agitations from the affected persons.	Local	Temporary	Strong	Moderate
12	Sexual Exploitation and Abuse and Sexual Harassment	Employees of Project Contractors and Sub-contractors may be perpetuators or survivors of rape and other GBV, SEA/SH incidents.	Local	Temporary	Average	Moderate

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
13	Impacts on cultural heritage/ archaeological resources	Construction activities may encounter cultural and archaeological resources or chance finds. Construction can also review buried resources necessitating selvage archaeology for recovering and protection.	Local	Permanent	Strong	Major
14	Impact on vulnerable and marginalised groups	Construction activities may interfere with some vulnerable groups such as persons with disabilities and marginalized groups such as beggars which could temporarily impact on their livelihoods if trenches are dug across their access points	Local	Temporary	Average	Moderate
15	Water Quality	Construction activities may generate hazardous waste that could contaminate water sources through surface runoff.	Local	Temporary	Average	Moderate
	Labor and working conditions	Sub Project Contractors and Sub-Contractors may practice unfair/discriminatory recruitment practices (e.g., against women) and recruit unqualified or under aged persons (child labour) to work on site. Sub Project Contractors and sub-Contractors may attempt to subvert the national labour laws, e.g., paying wages lower than the national minimum wage.				

Potential Operation and Maintenance Phase Adverse Impacts

Constructional phase impacts such as (i) vegetation removal, (ii) sediment transport, (iii) waste disposal (including e-waste), etc. may also apply during the operational phase during maintenance activities depending on the site conditions. The additional operational phase potential adverse impacts are provided in **Table 4-4.**

Table 4-4: Potential Operational Phase Adverse Impacts

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
1.	Occupational health & safety issues	Maintenance activities, including trenching to fix damaged sections of the fibre network. will put workers at high risk of accidents. Workers may also be exposed to dust, exhaust fumes and noise.	Site-specific	Temporary	Strong	Major
2.	Public safety and traffic issues	Occasional maintenance activities within the RoW of highways, urban and feeder roads may temporarily affect traffic flow. Uncovered trenches and dug outs from maintenance activities may also compromise public safety and could collect water for breeding of mosquitoes.	Local	Temporary	Average	Moderate
3.	Electric and magnetic fields	Electric and magnetic fields are emitted by electrical devices. These fields increase in strength as the voltage increases. Radio waves and microwaves are forms of electromagnetic energy emitted by transmitting antennas/ cell sites. However, there is no empirical data demonstrating adverse health effects from exposure to typical electromagnetic frequency levels from transmission equipment.	Local	Permanent	Weak	Minor

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
4	Electronic Waste management	The deployment and operation of infrastructure could result in electronic wastes, such as spent circuit boards, transformers, capacitors, transistors, and hazardous wastes including, nickel, lead or cadmium batteries, and old/broken cables. This e-waste may pose a risk to the environment and communities if not safely disposed.	local	Temporary	Average	Moderate

5. ANALYSIS OF ALTERNATIVES

Alternatives are options, choices, or courses of action meant to accomplish the selection of the best choice in an environmental and social assessment study. The analysis of alternatives is essentially, different ways in which the MIC can feasibly meet the project's objectives, for example by carrying out a different type of action, choosing an alternative location or adopting a different technology or design for the project as well as the "no project option" and its adverse effect on the beneficiary communities/ population. At the more detailed level, alternatives merge into mitigating measures where specific changes are made to the project design or to methods of construction or operation to avoid, reduce or remedy environmental risks and impacts.

5.1. Options for Consideration

The following technical alternatives should be investigated to inform the proposed project:

1. Site Selection Options;
2. Fibre Network and Cable Deployment Options; and
3. Power Supply Options.

Site Selection Options

The proposed project is expected to use existing facilities and install new equipment. Already existing Right of Way (RoW) would not require any resettlement of the Project Affected Persons (PAPs). Thus, the option to use existing facilities than newly acquired government RoWs is preferred. The choice of the existing corridor provides the opportunity to avoid paying huge compensation for land by the government if new land (greenfield) is to be accessed and developed for the proposed project facilities. The proposed project design shall avoid traversing ecologically sensitive ecosystems, national parks, forests reserves, parks, protected wetlands/ Ramsar sites, and buffer zone around water bodies.

Fibre Network Deployment Options

Fibre optic cables have several advantages including being protected from hash weather conditions and damages. The methods for deployment proposed to be investigated for the fibre network are presented in **Table 5-1**.

Table 5-1: Fibre Network and other Cable Deployment Options

Option/ Method of Deployment	Potential Environmental/ Social Implications	Potential Technological/ Economic Implications
Trenching only	**Advantages** 1. Improvement in social status for those who gain employment during construction work. **Disadvantages** 1. Greater damage to the environment through digging and excavation. 2. Damage to property during construction. 3. Interruption of social activities during construction works, especially in congested areas. 4. Can have traffic impacts through construction along and across feeder road networks. 5. Negative visual impacts during construction.	**Advantages** 1. High labour required resulting in greater employment opportunities during construction. **Disadvantages** 1. Potential of higher compensation/re-instatement cost due to affected property. 2. Longer time required to complete construction activities. 3. Can interrupt livelihood activities during construction, especially in congested areas.
Thrust boring only	**Advantages** 1. Less damage to the environment during construction. 2. Less damage to property during construction. 3. Less interruption of social activities during construction. 4. Less visual impacts during construction. 5. Less impacts on traffic during construction. **Disadvantages** 1. Noise from machine during boring activity.	**Advantages** 1. Low/nil compensation/re-instatement cost as there is minimal damage to property. 2. Work can be completed faster. 3. Thrust boring can take place without interrupting livelihood activities. **Disadvantages** 1. High cost of construction due to highly skilled expertise and special machinery required. 2. Less labour required, resulting in less employment opportunities.
Combination of thrust boring and trenching	**Advantages** 1. Less environmental damage at areas where thrust boring is used. 2. Less obstruction to social activities as boring can be used for congested areas. 3. Less impacts on traffic during construction as thrust boring can be used across roads instead of cutting through urban/feeder roads. **4.** Less visual impacts in areas where boring is used. **Disadvantages** 1. Damage to the environment in less urban areas where trenching is preferred. **2.** Visual impacts in areas where trenching is used.	**Advantages** 1. Low/nil compensation/re-instatement cost for urban areas where thrust boring is used. 2. Work can be completed faster. 3. Labour required for areas to be trenched, hence more jobs created. 4. Less interruption to livelihood activities in congested areas where thrust boring is used. **Disadvantages** **1.** Skilled expertise, machinery and high labour required may result in higher construction cost

Power Supply

Grid connection

Connection of proposed project facilities to the national grid will be cheaper and less easy to implement. However, a backup power source will be required to cater for periods of power outage.

Distributed Generation

The use of generators as the main power source to the proposed project facilities will require a person to be constantly monitoring the facilities to ensure there is always fuel in the generator. With regular maintenance and ensuring availability of fuel for the generator, power will be constantly available for the proposed project facilities. The use of generators as the main power source may however be more expensive to run compared to depending on the national grid. Generators may impact on the air quality through exhaust emissions and generate noise. Generators may however be used as a backup power source for the proposed project facilities.

Solar Power

Solar energy may be harnessed to power the proposed project facilities through the installation of solar panels for the various project facilities. Solar energy is more environmentally friendly as there are no emissions and is a more reliable source of electricity. It may not require any backup power source and personnel to constantly be onsite to monitor. The use of solar energy will be expensive to install but will have lower operational costs. The proposed project will avoid procurement of solar panels produced using forced labour.

6. PROPOSED MITIGATION MEASURES AND PRINCIPLES

The proposed mitigation measures and/ or options and guidelines have been designed to avoid, minimize and reduce negative environmental and social impacts and these are provided in **Table 6-1**.

Table 6-1: Proposed Mitigation Measures

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
Project design and Planning Phase				
1.	Discrimination in labour recruitment and poor working conditions	• Implement provisions in LMP	Contractors	1 month
	Exclusion of vulnerable individuals/ beneficiaries in the selection for ICT training	• Clear selection criteria • considerations for targeting and differentiated treatment for groups women, persons with disabilities, youth, beneficiaries from remote areas.	PIU	1 month
	Dispute and discrimination in the selection of institutions and communities for last mile connectivity	• Clear selection criteria		1 month
	Site selection for works without adequate consideration for E&S risks and impacts	• Screen any proposed subproject in accordance with the Environmental and Social Management Framework (ESMF) prepared for the Project	PIU	1 month
	Preparatory Phase			
	Occupational health & safety	• Workers/surveyors should wear appropriate PPE such as reflective jackets and safety boots. • Use warning/caution signs to alert on coming vehicles of the presence of workers.		Term of project
2.	Unwillingness/ disputes over land	• Ensure adequate consultations at the local/traditional levels to confirm ownership and obtain free, prior, and informed consent from landowners. • Ensure proper acquisition and documentation of land for the project. • Put in place an effective grievance redress mechanism. • Prepare and implement RAP per provision of ESS5 and project RPF	PCU	Term of project
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.	Contractors	Term of project

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
		• Burning should not be used for vegetation clearance along major highways prior to trenching.		
4.	Impacts to soil and sediment transport	• Organize deployment of project infrastructure into sections and complete one section (trenching, laying of cables and covering) before moving to another. • Reuse piled up soil for backfilling of trenches. • Covered trenches should be properly compacted.	Contractors	Term of project
5.	Generation and disposal of waste	• The contractor should develop and implement a waste management plan during the construction phase. • Excavated soil should be reused for backfilling. • Concrete debris should be collected and disposed at approved dumpsite. • 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.	Contractors	Term of project
6.	Occupational Health & Safety (OHS) issues	• The contractor should adopt a health & safety policy which should be implemented during the construction works. • All active construction areas should be marked with high visibility tapes to reduce the risk of accident involving pedestrians and vehicles • Prepare an emergency response plan for works. • Experienced personnel should be engaged for the construction works. • 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.	Contractors	Term of project
7.	Public safety and traffic issues	• Sensitize the public, especially traders within the RoW of the upcoming works prior to construction activities. • Organize works into sections and complete each section before the next section to ensure trenches are covered within the shortest possible time. • Carry out deployment of metro fibre network at off peak periods such as at night or weekends where possible. • Cordon off all trenches and excavations with caution tapes and use warning signs at vantage points to indicate ongoing construction works. • Prevent entry of unauthorized persons to the construction site.	Contractors	Term of project

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
		• Engage staff of Motor Traffic and Transport Directorate (MTTD) to direct traffic to reduce traffic congestions. • 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 prevention of HIV/AIDS 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.		
8.	Sanitation and hygiene	• Provide bins for temporary collection of litter (including polythene bags, drinking water sachets, etc.) for disposal at approved dumpsites. • Provide toilet facilities for use by workers at every site.	Contractors	Term of project
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. Free, prior, and informed consent should be obtained before construction begins. • All affected properties should be reinstated immediately 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.	PCU, Contractors	3 months
10.	Impacts from visual intrusion	• Reinstate all trenched areas to their original or improved state. • Complete one section of work (trenching, laying of cables and reinstatement) before moving to the next section. • Proper housekeeping should be ensured at the construction sites. • All waste that cannot be reused should be collected and properly disposed of at an approved dumpsite.	Contractors	2 months
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 airborne dust. • Ensure engines of vehicles/trucks and earth moving equipment are switched off when not in use.	Contractors	1 month

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
		• Use road worthy vehicles and ensure regular maintenance of vehicles, equipment, and machinery to reduce noise. • Keep work within working hours of the day.		
12.	Disruption of utility service	• Ensure all cables are laid strictly within the mandatory road reservation with assistance from the Sierra Leone Roads Authority, as appropriate. • Liaise with utility service providers and telecommunication companies with service lines within the RoW to prevent the destruction of their lines.	Contractors	1 week
13.	Fire risks	• Educate workers and the public on the effects of fire on the project. • Prevent entry of unauthorized persons to construction sites through the use of 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.	Contractors	1 week
14.	Conflicts/public agitation	• Continuously sensitize the public on the construction works throughout the construction period. • Consult and seek the free, prior, and informed consent of affected persons before construction works. • Reinstate any affected property immediately to its original or improved state. • Provide alternative routes where necessary to ease impact on road users. • Engage staff of the Road Safety Corps to direct traffic to avoid traffic congestion.	Contractors	Term of 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 entrances to shops immediately after deploying metro fibre network at that section. • Help traders who may have to temporarily move their wares and stores. • Consider undertaking certain construction activities on weekends (Sundays) when commercial activities are less intense	PCU, Contractors	3 months
16.	Chance finds/ cultural heritage and archaeological interest as well as	• Identify cultural heritage resources and existing ecologically sensitive areas and avoid them as much as practicable. • The Project should implement a chance find procedure in line with ESS8 requirements (**see Appendix 7-1**),	Contractors	3 months

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
	on sociocultural norms	national laws and reporting system to be used by contractors if a cultural heritage feature or ecologically sensitive item/issue is encountered. • Any antiquity found during the construction phase will be made known to the Monuments and Relics Commission as required. • Where the observance of traditional and cultural norms about restricted noise making during festivals will conflict with the timelines of the sub- projects, the PCU will engage the traditional authorities for exemptions if possible.		
	Water Quality	• The contractor should develop and apply measures for waste management to reduce risks to water bodies in the surrounding. • Proper supervision and monitoring should be maintained during construction activities	Contractors	3 months
Operational Phase				
17.	Occupational health & safety	• The operator should develop and implement standards operating procedures (SOPs) which should include monitoring and maintenance of the facilities. • The operator should adopt a health & safety policy including an emergency response plan, which should be implemented. • Experienced personnel should be engaged in the construction works. • Health & safety induction should be carried out for all new employees and periodic training 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.	Contractors	3 months
18.	Public health & safety	• Cordon off maintenance sites with caution tapes and prevent entry of unauthorized persons to the maintenance site. • Use warning signs at vantage points to warn the public of ongoing maintenance works. • Engage staff of MTTD to direct traffic to reduce traffic congestion. • Where necessary in extreme cases, provide alternative routes during road diversions with the assistance of traffic wardens.	Contractors	1 month

No.	Potential impact	Mitigation Measures	Responsible	Time Frame
		• Awareness creation sessions and meetings with community leaderships including women, elderly and PwDs shall be carried out along the cable laying route. • Covid-19 protocols should be adhered to/observed during public engagements and project implementations.		
	Sexual Exploitation and Abuse and Sexual Harassment	• Project will prepare and GBV Action Plan • rollout of GBV-sensitive procedures for the GRM, • code of conduct, • worker and community training, • service provider mapping and referral pathway to service providers and accountability and response framework. • Contractor ESMPs will assess site specific SEA/SH risk as part of ESMP and material measures for addressing such risks will be well costed and included in ESMPs for implementation.	PIU/ Contractor	Throughout project duration
19.	Electric and magnetic fields	• Follow good engineering practice in siting and installation of directional links (e.g., microwave links) to avoid building structures. • Consider public perception about electromagnetic frequency issues by consulting with local communities during the siting process of radiation emitting equipment. • Evaluate potential exposure to the public against the reference levels developed by the Nuclear Safety and Radiation Protection Authority. Average and peak exposure levels should be below the ICNIRP recommendation for general public exposure.	Contractors	1 month
20.	Generation and disposal of waste including e-waste	• The Project should implement an e-waste management procedure in line with requirements of ESS3 (**see Appendix 7-2**) and Sierra Leone's EPA requirements. • Food and plastic waste should be separated as much as possible for disposal by accredited third party contractors at designated metropolitan, municipal or district assembly disposal site	Contractors /Third party	Period of construction

7. ENVIRONMENTAL AND SOCIAL MANAGEMENT PROCESS

The ESMF incorporates an overall environmental and social management process for the SL DTP and proposed subprojects. The process involves steps and associated activities for the Borrower to carry out the environment and social assessment (ESA) of projects in line with the objectives of the ESMF and develop an Environmental and Social Management Framework Guidelines for the mitigation of the potential negative impacts and for monitoring compliance with the relevant Environment and Social Standards (ESSs) of the ESF. The management process will help identify the procedures to assess the environmental and social risks and impacts. associated with the project and ensure that positive impacts are optimized, and negative impacts are minimized or mitigated.

7.1. EIA Procedure to be followed by SL DTP

The World Bank ESS 1 provides guidance on the environmental assessment procedures for WB funded projects. The Environment Protection Agency (EPA) has also established an acceptable process to screen and evaluate all developments, undertakings, projects, and programs which have the potential to give rise to significant environmental impacts. The two processes are largely similar, and the procedures are therefore summarized in the following sections and will mostly be followed by the proposed SL DTP.

The environmental and social management procedure to be followed shall include the following ten (10) steps:

Step 1: Screening
This process is meant to categorize the assessment in terms of whether a full-blown ESIA is needed or an ESMP. The considerations for categorising projects include those presented in table 7-1.

Table 7-1: EPA's categorisation of projects

CATEGORY	TYPE OF ENVIRONMENTAL REPORT REQUIRED
A Category A: A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive,7 diverse, or unprecedented. These projects may affect an area broader than the sites or facilities subject to physical works. If large, the project is more likely to be a Category A project. A potential impact is considered "sensitive" if it may be irreversible (e.g., lead to loss of a major natural habitat), affect vulnerable groups or ethnic minorities, involve involuntary displacement and resettlement, or affect significant cultural heritage sites.	ESIA + ESMP
B: A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas – including wetlands, forests, grasslands, and other natural habitats – are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects.	ESIA +ESMP (Restricted)
C	

CATEGORY	TYPE OF ENVIRONMENTAL REPORT REQUIRED
A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts.	ESMP

Step 2: Scoping
This process is intended to define the scope of the environmental and social assessment. Issues relevant for ESIA will be identified and the appropriate studies and assessment method to be used will be prescribed and agreed upon. Also important is the agreement between the regulator and the PMU on the study area, so that the assessment activities are focused on the area of influence which can be further classified as direct impact area, secondary impact area, and regional impact area. Terms of Reference (ToR) for the ESIA study is normally prepared as an output of the scoping exercise. The ToR needs to be approved by EPA-SL.

Step 3: Baseline Data Collection
Baseline data information is an important process in preparing the ESMP. The term "baseline" refers to the collection of background information on the biophysical, social, and economic settings of the proposed subproject area. It is essential that the current environmental condition in the Project site be characterized prior to any works. To do this, baseline data collection, both primary and secondary (physical, biological, socio-economic, and so on) should be collected following an agreed methodology and time frame. There are standard methodologies available and survey specialists for the various environment assessment parameters, such as for air, water, soil, noise, biodiversity, and socioeconomics.

Step 4: Identification Environmental and social Risks and Impacts
The ESIA exercise will identify potential impacts and assess their significance. To do this, the data gathered should first be processed, analysed, and interpreted. The identified impacts, be they direct or indirect, are assessed based on their permanence, magnitude, reversibility, and occurrence. Categories of impacts, direct, indirect, or cumulative, should be indicated.

Step 5: Design Mitigation and Monitoring Proposals
Efforts should be taken to avoid or minimize adverse environmental impacts whenever possible. Appropriate mitigation measures need to be proposed to address these impacts and a monitoring plan needs to be in-place to check on the performance of these measures. Social impacts such as physical, economic, or even cultural displacement will be addressed by other instruments such as RAP/ARAP, Gender Action Plan (GAP) etc. While negative impacts need to be mitigated, positive ones do need to be enhanced. These enhancement measures should also be taken into consideration in the planning process.

Step 6: Public Consultation and Participation Process
Consistent with the Bank's transparency policy in all its projects, and the SEP for the project that has been disclosed, it is essential that meaningful public participation is observed in the ESIA process. The most popular way of obtaining public participation is through Public Consultation meetings. Early in the project planning process, local stakeholders need to be informed of the project, and their support and cooperation solicited. This concern (participation) is even more

relevant in the event of physical, economic, and cultural displacement of local people. It is essential that affected households and their leaders participate in planning for their future such as compensation for affected assets, suitable relocation site, livelihood and income restoration, employment opportunities in the construction project, etc.

Step 7: Preparation of Environmental and Social Safeguard Instruments
An ESIA report is prepared by a qualified consultant following the standard report format prescribed by the World Bank and containing the elements described in the steps above. The report specifies E&S standards for each subproject to ensure environmental sustainability and social acceptability. It also includes mitigation and enhancement measures to address anticipated adverse and positive impacts, arranged by project phase (i.e. Pre-Construction; Construction; and Operations), as well as elements of the affected environment (i.e. physical, biological, chemical, or socio-economic). This plan (the Environmental and Social Management Plan) is subject to review and approval by the proponent and the World Bank as part of the ESIA or as a stand-alone document, prior to its inclusion into the bidding documents, and implementation.

Step 8: Disclosure of Safeguard Instruments
Once reviewed and approved by the proponent and Bank, the report is posted on the WB's website and appropriate sites managed by the contractor (proponent) in accordance with the Bank's transparency policy . The report is also disclosed to all those affected or that will be potentially affected by the project, to raise risk awareness and elicit participation in implementing and monitoring measures for management and mitigation.

Step 9: Incorporation of ESMP into Construction Bid Document
The ESMP requirements should be captured into bidding and contract documents to ensure that obligations are clearly communicated to contractors and implemented. The ESMP shall be implemented by the construction contractor under the supervision of the PCU Environment and Social Specialist. The ESMP should be incorporated into the construction bidding documents to enable the bidding contractors appropriately and adequately budget and plan towards its implementation. Contractors shall be required to implement the ESMP as well as a site-specific Contractors' ESMP to be supervised by the supervising team responsible. The World Bank as well as the PCU will carry out supervision missions to ensure compliance.

Step 10: ESIA/ESMP Reviews
All ESMPs (whether generic or contractor-specific) shall be reviewed and cleared from time to time by the World Bank to ensure compliance with ESS1 and other relevant policies, procedures and guidelines. These reviews will support the preparation of standardized environmental and social safeguards documents for the appraisal and implementation of the subprojects. Appendix 15-1 presents an Environmental & Social Screening checklist consistent with the SL EIA Laws and World Bank standards requirements.

7.2. Summary of Major Environmental and Social Reporting Requirements

A summary of the major environmental and social reporting requirement is provided in **Table 7-2.**

Table 7-2: Summary of Major Environmental and Social Reporting Requirements

No.	Report/Document	National and or World Bank	Objective
1	ESMF	EPA/ MIC/ World Bank	To guide environmental and social screening, scoping and management processes
2	ESIA/EIA	EPA/ MIC / World Bank	To obtain environmental approval for project implementation
3	ESMP	EPA/ MIC / World Bank	To provide a detailed plan to address specific construction and operational issues and impacts

7.3. Summary of Major National Permitting and Approval Requirements

A summary of the major national permitting and approval requirements is provided in **Table 7-3**.

Table 7-3: Summary of Major National Permitting and Approval Requirements

No.	Regulatory body	Permits/licenses and certificates	Applicable	Project Phase	Remarks /Status
1	EPA	Environmental Permit	Yes	Before Construction	-
		Environmental Certificate	Yes	During Operation	-
2	Sierra Leone National Fire Service	Fire Permit	Yes	Construction Stage	-
		Fire Certificate	Yes	During operation	-
3	Factories Inspectorate	Certificate of Registration	Yes	Construction/ Operation	Cell Sites
4	NATCOM	Telecommunications License/authorization	Yes	Construction/ Operation	Communication Network/ Fibre Network
5	Nuclear Safety and Radiation Protection Authority	Radiation Safety Certificate	Yes	During Operation	Communication Network
6	NATCOM	-Development Approval -Business Operating Permit	Yes	-Construction -Operation	Fibre network Communication Network

7.4. Guidelines/Checklists and Specific Action Plans

Guidelines and Checklists

Environmental and social management issues at various stages of the Project are governed or guided by several standards, including:

1. the ESMF requirements;
2. those contained in national legislation;
3. those established by industry codes of practice; and
4. international standards and guidelines (such as those of the WBG/ IFC).

Specific Action Plans

Specific action plans (as relevant to the contractor(s) works) will need to be developed by the contractor(s) to implement the mitigation and management measures outlined in this ESMF. Specific action plans could include the following:

1. Occupational Health and Safety Plan (including emergency response plan);
2. Environmental and Social Management Plan;
3. Traffic Management Plan;
4. e-Waste Management Plan;
5. Labour Management Procedure;
6. Citizen Engagement Plan;
7. Chance Find Procedures; and

Occupational Health and Safety Plan (OHSP)

During project implementation and with the implications that create the need for Occupational Health and Safety, measures will be proposed to prevent harm and ensure the health and safe working conditions and security of personnel involved in the project activities. Occupational Health and Safety measures are reflected in the LMP. This specific instrument is based on the mandates of ESS1 and ESS2, that establish the mechanism for the Occupational Health and Safety Plan (OHSP) and ensure that it is in line with the World Bank Group EHS Guidelines to ensure health and safety of workers during project implementation, with the purpose to avoid, minimize and mitigate those potential impacts that the activity could cause, and to avoid harm or any danger to peoples.

Environmental and Social Management Plan (ESMP)

Proposals for monitoring and managing adverse environmental and social impacts caused by project activities and decisions are included in Appendix 15-7. The measures include actions to consider in the project preparatory phase, construction phase, and operations phase. These measures apply to all steps to be taken by the PCU and its contractors to monitor, manage, and mitigate environmental and social risks and impacts resulting from project implementation.

Electronic Waste Management Plan (eWMP)

The plan provides guidelines and measures for managing e-waste during construction, implementation, and closing phases (see Appendix 15-3). The eWMP follows and complies with ESS1 of the Environmental and Social Framework, and its extent of application will depend on the project activities that will be performed at each project site. It will include the integral management of solid, liquid, and gaseous wastes. It includes measures to manage asbestos and other dangerous materials (electrical wastes, toxic chemicals, and paints, etc.), that could be used or be generated during the demolition, construction, upgrade or renewal of installations and infrastructure; as well during implementing activities (paper, office materials, paints, etc.), replacement of electrical equipment (computers, servers, cables, etc.). The plan will comply with the in-country legislations and regulations.

Chance Finds Procedures (CFP)

This guidance (see Appendix 15-2) follows the objectives of the Environmental and Social Standard of the WB: ESS8. During project activities that involve remodelling, upgrading, or constructing infrastructures, some of these actions can produce unexpected events such as findings of important scientific, cultural, or social structures or artefacts that could be considered of national, cultural, or historical values. Thus, a specific procedure must be implemented with clear responsibilities and actions to deal with any chance finds events. The basic procedure to follow in the Plan must allow for: i) stopping all activities in and nearby the findings, ii) informing the local pertinent national authority, iii) placing barriers and security to guard and protect from vandalism, iv) awaiting instructions and clearance by local pertinent authorities before proceeding with works.

Uncertainty and Change Management

Uncertainty in the development of the proposed SLDTP derives from several factors including:

1. Unconfirmed specific installation sites for proposed project equipment;
2. Unconfirmed locations within the RoW for extension of fibre network;
3. Unconfirmed total distance of fibre network; and
4. Unforeseen events (flooding, fire, etc).

However, the screening procedures followed have led to a thorough review of potential risks and impacts, which ensures due diligence at this point and during implementation. However, the PCU will liaise with the EPA to assess any change or engage an expert to assist in assessing changes that might occur after the completion of the ESIA. All such changes will be subjected to re-assessment, including further stakeholder consultation, and supplementary ESIA or ESMP or Environmental and Social Management Plan (ESMP) undertaken in line with the EIA procedures of Sierra Leone and consistent with the World Bank ESF.

8. ESMF IMPLEMENTATION AND MONITORING PLAN

8.1. Objective of Monitoring

This section sets out requirements for the monitoring of the environmental and social impacts of the SL DTP sub-project activities. Monitoring of environmental and social indicators will be mainstreamed into the overall monitoring and evaluation system for the project. Monitoring and evaluation is primarily required 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:

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 EIA/ ESIA and EMP/ ESMP.
ii. Alert project authorities by providing timely information about the success or otherwise of the environmental 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 EMP/ 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.

This section sets out requirements for the monitoring of the implementation of this ESMF and the environmental and social impacts to be associated with the project. Monitoring of environmental and social indicators should be mainstreamed into the overall monitoring and evaluation system for the project.

8.2. Types of Monitoring Required

Compliance Monitoring

The following activities should be conducted to ensure compliance with the recommendations of the ESMF and subsequent ESIA/ EIA Study:

1. As part of the planning stage, ensure that EPA Permits are obtained for specific subprojects.
2. Final designs should be completed and submitted to MIC or PCU following acceptance of the final Environmental Impact Statement (EIS) by EPA;
3. Confirm that all the design changes and design mitigation measures recommended by the EIA 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 EIS;
5. Following completion of the detailed designs, confirm that all mitigation measures recommended by the ESMF and confirmed by the ESIA/ EIA 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 considerations, are followed through 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 EIS forms part of the functions and mandate of the institution responsible for the management and operation of the project facilities.

Monitoring of Environmental and Social Impacts

The actual 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. The activities described in table 8-1 need to be conducted for impact monitoring.

Table 8-1: Monitoring and Evaluation Framework for ESMP

S/N	PHASE	INSTITUTION RESPONSIBLE	PERFORMANCE INDICATORS	PERIOD TO BE CONDUCTED
1	**PREPARATION/ PRE-CONSTRUCTION PHASE**	PCU staff/independent consultant	Have environmental and social accountability trainings been conducted? Are the environmental and social screening checklist utilized? Have studies been carried out and plans prepared? Have environmental and social monitoring mechanisms been established? Have Grievance redress Mechanisms been established? Is there effective feedback from project affected persons? Have environmental, social, health and broader impacts been identified, and mitigation measures designed	Before initiation of civil works
2	**CONSTRUCTION PHASE**	PCU Contractor/ Independent Consultant	Is there a community-driven approach in- use? Is the Grievance redress mechanism effective? Is there effective feedback from project affected persons? Have standard operating procedures for best environmental practices been established? Does the contractor have a safe-works procedure? Is a waste management plan developed? Is there an emergency planning framework?	During civil works implementation
3	**OPERATION AND MAINTENANCE PHASE**	PCU Contractor	Are environmental and social monitoring mechanisms being implemented? Is disaster and emergency planning proactive? Has training on ESMP implementation been conducted?	Operational and Maintenance phase to project closure

S/N	PHASE	INSTITUTION RESPONSIBLE	PERFORMANCE INDICATORS	PERIOD TO BE CONDUCTED
			Is the traffic management plan being implemented? Who is responsible? Is the ESMP being implemented? Is there any success in mitigation measures implemented? Is a disaster management mechanism in-place? No of casualties. Complaints from communities	

Environmental and Social Audit

An audit will assess the actual environmental and social impacts of subprojects, their accuracy of prediction, the effectiveness of impact mitigation measures, and the functioning of monitoring mechanisms. To promote compliance with the environmental and social issues identified in the ESMP, an auditing of the project sites shall be carried out quarterly. The objectives of these environmental auditing shall include the following.

- Ensuring compliance with environmental and social guidelines.
- Recommending areas of improvements in the ESMP;
- Updating database of environmental and social issues encountered on the sub project.

9. INSTITUTIONAL ARRANGEMENTS FOR ESMF IMPLEMENTATION

9.1. Project-wide Institutional Arrangement

The Ministry of Information and Communication (MIC) is the main implementing institution of the Sierra Leone Digital Transformation Project and directly involved with the preparation and review of the ESMF. The MIC will coordinate work among the relevant institutions and liaise with management on approval of agreed activities for speedy implementation. A technical team from the MIC will guide the implementation of the project. The successful implementation of the ESMF will depend on the commitment, capacity of personnel and the appropriate and functional arrangements within the MIC. The project has established an organizational structure with qualified staff to support management of E&S risks including E&S team for E&S management that are a part of the organizational structure. The project will engage a safeguard officer who will work directly with the PCU.

Given that social investors and service providers will be engaged to deliver activities under the project, it is important that the safeguard team of MIC screen project activities, advise appropriately and ensure that relevant safeguard instrument, e.g., ESIA, ESMP, etc. are prepared and cleared by the Bank before commencement of activities. In case of a financial institution being the social investor, the Project will ensure that they have their Environmental and Social Management Systems (ESMS) in place and have the capacity to implement the project in compliance with the World Bank Environmental and Social Standards.

The contractor(s) or artisans to be engaged to undertake project activities will also have a role to play in the implementation of sustainable environmental and social measures at the sub-project level. Consultation with CSO's NGO's and community representatives will also be crucial.

Project Steering Team

A Project Steering Team (PST) comprising the Minister, Deputy Minister, Chief Director and/or other delegated official will provide oversight for the entire implementation team. The PST will be responsible for assessing and guiding the project implementation progress on the ground and undertake site visits as necessary. Specifically, the PST will undertake the following functions:

- Provide guidance on strategic, policy and implementation issue
- Coordinate activities of the ministry, agencies and other stakeholders involve in the implementation of the project
- Review and approve annual work plan and budgets
- Review quarterly and annual progress reports and make recommendations
- Guard the implementation trajectory to ensure that project objectives are met
- Resolves issues that could not be dealt with by lower-level authority
- Provide oversight and ensure the project comply to all environmental and social safeguard requirements of the project.

The PST will be chaired by the Minister of Information and Communication or his/her designee and will include representatives of the following institutions:

- Ministry of Information and Communication; and
- National Telecommunications Communication
- Universal Access Development Fund
- Directorate of Science, Technology, and Innovation
- National Revenue Authority
- National Civil Registration Authority
- Ministry of Basic and Senior Secondary Education
- Ministry of Technical and Higher Education
- National Youth Commission
- National Commission for Persons with Disability

The representatives would be at the Chief Director level for the ministries and at the Director levels for the agencies.

Project Implementation Team (PIT)

The Project Implementation Team (PIT) will be made up of a team of leaders from MIC who will undertake the following:

- Coordinate work among the relevant institutions;
- Liaise with management on approval of agreed activities for speedy implementation;
- Liaise with District Assemblies to ensure their full participation in the supervision of the project;
- Prepare and update the schedule of activities/procurement plans to be executed under the project;
- Review reports submitted by supervising entities;
- Prepare briefs to the Ministerial leadership (PST); and
- Have overall responsibility to ensure the project comply to environmental and social safeguard requirements of the project.

Environment Protection Agency

The EPA is the national regulatory agency for the environment and has the mandate to review environmental and social management frameworks prepared in the country before disclosing the document at the EPA website and the info shop of the World Bank. The EPA will assist the MMDA's in monitoring activities that affect human and environment at the sub project level. They will ensure that activities of contractors and artisans comply with laid down procedures and guidelines that mitigate risks of noise, air/ water pollution, waste collection and disposal. The EPA will also deal with complaints that are environmentally related using national guideline and applying requisite sanctions to restore sanity in the operational area of the project.

9.2. Internal Compliance Monitoring

There will be an internal compliance monitoring mechanism put in place to ensure that environmental and social guidelines are followed. This will comprise the following channels:
The Safeguards team at the national level will also undertake monitoring of project activities and related environmental and social issues and report to the SL DTP coordinating unit at the national level. Safeguards consultants as part of their monitoring schedules will consult with project contractors and community focal persons to ensure that mitigation measures outlined in the ESMP at this level is adhered to. The level of compliance especially on social mitigation measures would however be determined by the level of involvement, sensitization and understanding or otherwise of the project in the beneficiary communities prior to the start of the project.

9.3. ESMF Institutional Arrangements

ESMF implementation will involve the following roles and responsibilities:

Environment Protection Agency (EPA)
EPA will play the leading oversight role of monitoring the environmental impacts triggered by the activities of SLDTP. The EPA will carry out this role by ensuring that EMPs for the subprojects are being implemented as specified therein. The EPA will rely on a bottom-up feedback system from the ground by going through relevant project/ monitoring reports and making regular site visits to inspect and verify for themselves the nature and extent of the impacts and the success or lack of the mitigation measures. The EPA will prepare brief consolidated periodic monitoring reports for submission to MIC, PCU and other key stakeholders.

Project Coordinating Unit

The PCU will be primarily responsible for ensuring compliance to the monitoring framework. The PCU will engage experts to undertake the field sampling and monitoring work and will review the monitoring reports emanating from these experts and will then upon approval submit these monitoring reports to EPA and other relevant stakeholders. The PCU will also provide overall coordination in monitoring including coordinating of training in collection and analysis of monitoring data for data collectors. Critical role of the PCU will include management of all baseline and monitoring data. The PCU will implement all the necessary modifications in the monitoring framework.

Contractors

The contractor will be mainly responsible for the monitoring of the construction impacts identified in Chapter 8.

10. CAPACITY BUILDING AND TRAINING

10.1. Major Institutions

The main institutions to be involved with the implementation of the project and ESMF and to ensure sound management of the environmental and social aspects include the PCU and relevant Ministries, Departments, and Agencies such as the:

- Environment Protection Agency
- Local Councils
- Ministry of Social Welfare
- Ministry of Lands, Housing, and Country Planning
- Ministry of Gender and Children's Affairs

10.2. Capacity Building Requirements

Project institutions need to understand the purpose of the ESMF, their expected roles and the extent to which the ESMF will facilitate the respective statutory functions. This will engender the required collaboration for the ESMF implementation.
Competence of government i.e., the ability of active government parties to carry out their respective design, planning, approval, permitting, monitoring, and implementation roles will, to a large extent, determine the success and sustainability or otherwise of the project.

The objectives and provisions of this ESMF therefore cannot be achieved in the absence of relevant competencies on environmental and social management within the MIC, the project/ subproject contractors, and other stakeholders. The following sections provide recommendations on capacity building to support the program's environmental and social management objectives.

Identification of Capacity Building Needs

The Ministry of Information and Communications (MIC) continues to play the key role of GoSL's National Digital Transformation agenda, as MIC is in charge of digital policy and legislation and it will continue to lead the project implementation arrangement through the project, however, MIC's operational capacity is limited including capacity for environmental and social risk management and will need to be strengthened as it continues to face institutional challenges with inadequate staffing levels, a lack of adequately trained staff, and outdated equipment, among other things. The MIC has not yet implemented any World Bank financed projects and is therefore not yet familiar with the Bank's Environmental and Social Framework (ESF). Capacity building and training will be necessary throughout the life of the project.

The first step in pursuing capacity building on E&S issues as provided in the Environmental and Social Commitment Plan (ESCP) and in compliance with the ESF will be to identify the capacity needs of the various stakeholders e.g., PCU staff, PwDs, contractors/ project workers etc. 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 enables them to perform effectively. It also involves organizational

development, the elaboration of relevant 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). The capacity building requirements will mostly be in the form of training workshops as follows and in line with the provisions made in the ESCP for SL DTP:

1. A training workshop on the ESMF and the World Bank ESF/ ESS should be organized for the major stakeholders identified above. The training workshop would cover (i) Gender and inclusion issue, (ii) Livelihood restoration and Chance finding, etc and as provided in the ESCP.
2. A training workshop for the key project implementers including PwDs, MIC, EPA and the proposed PCU among others should cover the following:
    a. Inclusion of environmental and social mitigation measures & penalties in contract documents of contractor and contractor supervision.
    b. Environmental and social screening and monitoring; and
    c. Public/community participation techniques and procedures.

For each group, training will be provided at different level of expertise in different areas, and would include:

1. In-depth training to a level that allows trainees to go on to train others, including environmental and social procedures where relevant; and
2. Sensitization or awareness-raising in which the participants are familiarized with the significance or relevance of the issues, to the extent that they can identify potential or emergent challenges and request further assistance as necessary.

To mitigate these risks, the project will include dedicated resources to enable MIC to hire personnel with the relevant skills to support the management of E&S risks. GoSL will recruit a full time Environmental and Social Specialist as part of the PCU. These specialists will manage risks during implementation including E&S screening, ensuring the development of requisite E&S assessments and relevant documents by external consultants/firms, overseeing stakeholder consultation, managing contractor performance, and conducting implementation monitoring and reporting.

10.3. Public Engagement/Sensitization

To ensure proper implementation of the ESMF, project/ subproject and to avoid public agitations/ litigations which could hinder the project, the project should engage/ sensitize the public, particularly those who may be affected within the RoW and sites for project facilities and those who are interested in the project. The engagement/ sensitization should include the schedule of implementation, reinstatement process for any affected property, grievance redress mechanism, traffic management, etc. The public engagement/ sensitization should be carried out ahead of construction works and any grievances addressed.

Table 10-1: Training and Capacity Building Programs

Training Required	Who to train	When	Training to be conducted by who
WB ESSs requirements and implementation	PCU staff, contractors	During project preparatory stage	World Bank
Project Screening and Scoping	PCU staff	During project preparatory stage	Consultant
Preparation of TORs, ESIA/ESMP Implementation	PCU staff	During project preparatory stage	Consultant
GBV/SEA/SH awareness, monitoring, and reporting	PCU staff, contractors	During project preparatory stage	Consultant
Project Management (scope, implementation, time, budget, costs, resource, quality, procurement, monitoring and evaluation)	PCU staff	During project preparatory stage	Consultant
Environmental and Social Audits	PCU staff, contractors	During project preparatory stage	Consultant
Grievance redress mechanism	PCU staff, contractors, local contacts	During project preparatory stage	Consultant
Stakeholder engagement and project communications	PCU staff	During project preparatory stage	Consultant

11. GRIEVANCE REDRESS MECHANISM

11.1. Objective of the GRM

The main objective of a Grievance Redress Mechanism (GRM) is to assist the implementing institutions to resolve complaints and grievances in a timely, effective, and efficient manner that satisfies all parties involved. It is to help track project-related complaints including a feedback system for regular and timely feedback on actions taken to respond to complaints and to address and resolve any issues or problems connected to the proposed project from affected persons or community members promptly and in a manner that will be acceptable to all parties. The GRM is an integral part of this ESMF and helps to create avenues for receiving and responding to stakeholder concerns and complaints about issues related to the project. Specifically, it provides a transparent and credible process for fair, effective and lasting outcomes. It also builds trust and cooperation as an integral component of broader community/ citizen engagement that facilitates corrective actions. Specifically, the GRM:

1. Provides affected people with avenues for making a complaint or resolving any dispute that may arise during the implementation of projects;
2. Ensures that appropriate, timely and mutually acceptable redress actions are identified and implemented to the satisfaction of complainants.
3. Verify that complainants are satisfied with redress action; and
4. Avoids the need to resort to judicial proceedings.

11.2. Proposed Grievance Redress Mechanism

Having multiple stakeholders and implementing agencies on board the project could lead to complaints, misunderstandings, conflicts, and disputes. The project has a grievance redress mechanism that will provide all direct and indirect beneficiaries, service providers and other stakeholders the opportunity to raise their concerns and/or ask for information (see **Appendix 15-5** for Grievance Redress Forms). Stakeholders will be informed of the grievance redress mechanism in place, as well as the measures put in place to protect them against any reprisal for its use. This will be done during sensitization activities and other interactions with stakeholders. Grievances arising with the implementation of the project could typically include access and quality of services, issues about targeting for services and availability of facilities and resources. Grievances may also relate to expansion of infrastructural activities with some physical footprints in the later stages of project implementation.

11.3. Grievance Redress Mechanism Levels

The GRM levels is presented in **Table 11-1** and further illustrated in **Figure 11-1**.

Table 11-1: Grievance Redress Mechanism Levels

Level One	1. Receive grievance 2. Acknowledge grievance 3. Register/Log 4. Screen 5. Investigate 6. Resolution 7. Provide feedback

Level Two	Grievance Redress Committee
Level Three	Mediation
Level Four	Court

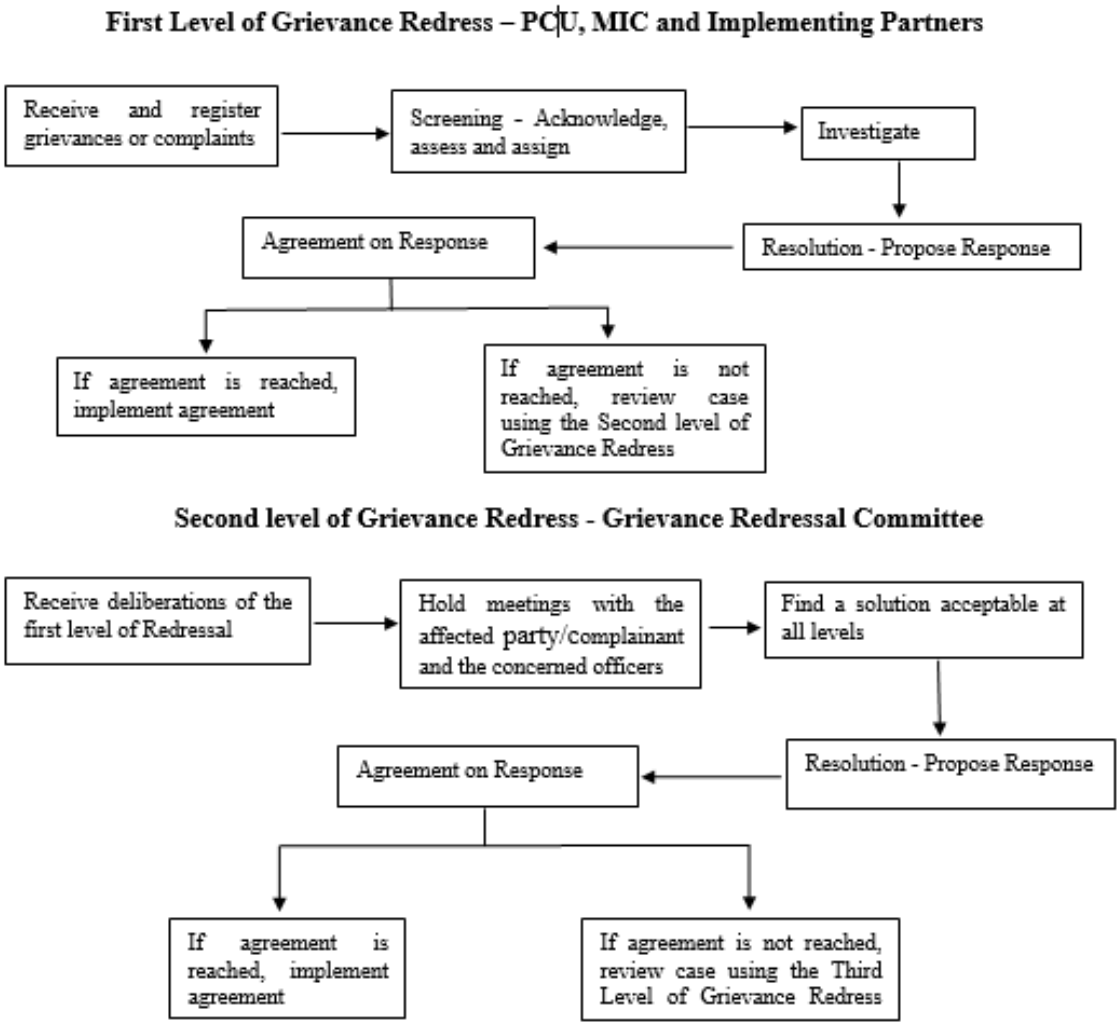


Figure 11-1: Proposed GRM Structure

First Level of Grievance Redress

The project institutions within which project activities are carried out are the first level of grievance redress. Each institution (MDAs, non-MDA offices) where project activities are undertaken will use existing grievance mechanisms to review and address grievances. The first level of grievances will be handled at the PCU level GRM that is composed of representatives from the implementing agency MIC and the implementing partners represented in the PSC.

The full contact details of the grievance committees will be disclosed publicly on the website of the GRM member ministries and agencies. The same information should be displayed on the notice boards of the agencies and institutions along with the complainant box that should be placed in a visible location within the premises of the institutions, ministries, and agencies. Grievances from the project dedicated complainant box will be collected and reviewed by the institution's grievance committee on a weekly basis.

Grievances can be received in person, verbally via phone, in writing or via e mail, fax, text message or any other media. Grievances submitted anonymously could be submitted through the complainant box. All grievances will be acknowledged by telephone or in writing by the grievance body of the institution within 48 hours of receipt and the complainant informed of the approximate timeline for addressing the complaint if it can't be addressed immediately.
The grievance body will work to ensure the speedy resolution of the grievance. If the complaint cannot be resolved at this level, it is taken to the next level.
The point of receipt of complaints is listed hereunder:

Register/Log Grievance: After receiving and recording the grievance, it will be accepted and registered for review.

Screen: The complaint will be forwarded to the grievance structure that is responsible for investigating the claim and liaising with the aggrieved to come to an acceptable resolution. Meetings with the grievant/complainant will be held, if necessary, to resolve the matter.

Investigate: The investigation by the grievance committee will include, but not limited to, meetings with the grievant/complainant, site visits, meetings/interviews with project staff and collection of relevant documentation and other forms of evidence.

Resolution: The resolution at the first tier should normally be completed within 15 working days of receipt of the grievance and notified to the concerned party. If the grievance is not resolved within this period, it can be referred to the next level of the Grievance Redressal system. However, once it is determined that progress is being made towards a resolution, the grievance will be retained at this first level. The complainant will be informed of this decision and an estimated time for the resolution of the matter will be given either verbally or in writing. If the issue cannot be resolved within 25 working days, it will be transferred to the next level.

Once a resolution has been agreed and accepted, the complainant's acceptance will be obtained. If the proposed resolution is not accepted the grievance will be escalated to level 2.

Second level of Grievance Redress

A Grievance Redressal Committee (GRC) will be formed at the PCU/MIC comprised of key implementing entities, that will consist of members of their respective Project Steering Committees. The GRC will be called into place when a first-tier resolution is not found, but it could also meet on a quarterly basis to evaluate the performance of the project level GRM. From this perspective it is a standing body. This committee will be chaired by the GRC representative of MIC in the Project Steering Committee. The implementing partner ministries/agencies represented in PSC will assign representatives to the GRC.

The functions of the GRC are as follows:

1. Provide relief and support to the affected persons in a timely manner
2. Prioritize grievances and resolve them at the earliest reasonable time
3. Provide information to PCU on serious cases at the earliest plausible time
4. Coordinate the process of the Affected Persons getting proper and timely information on the solution worked out for his/her grievance
5. Study the normally occurring grievances and advise the PM/PCU as to their scale and scope.

The project coordinator at the PCU will coordinate the convening of the meetings of the GRC. He/she is also responsible for briefing the GRC on the deliberations of the first level of Redressal. The GRC will hold the necessary meetings with the affected party/complainant and the concerned officers and attempt to find a solution acceptable at all levels.

The GRC will record the minutes of the meeting. The decisions of the GRC will be communicated to the complainant formally and if she/he accepts the resolutions, the complainant's acceptance will be obtained.

If the complainant does not accept the solution offered by the GRC, then the complaint is passed on to the next level/or the complainant can activate the next level. It is expected that the complaint will be resolved at this level within 30 working days of receipt of the original complaint. However, if both parties agree that meaningful progress is being made to resolve the matter may be retained at this level for a maximum of 60 working days.

Third Level of Grievance Redress

Failure to resolve the complaint at the 2nd level will require a mediation by a group or an individual mediator agreed to by both parties. The officer in-charge of grievance redress at the PCU will trigger the resolution process at this level. It is expected that the complaint is resolved within Ten (10) working days upon the receipt of complaint. The decision rendered in the mediation shall constitute final resolution of the dispute at this level.

Fourth Level of Grievance Redress

If the affected party/complainant does not agree with the resolution at the 3rd level, or there is a time delay of more than 60 working days in resolving the issue, the complainant can opt to consider taking it to the fourth level. This level involves the complainant taking legal recourse within the local courts.

11.4. SEA/H Related Grievance Redress Mechanism

When Sexual Exploitation, Abuse and Harassment (SEA/H) related complaint is received at the first or second tier of GRM, the complaint should be kept confidential by the person/persons receiving the complaint. The complaint should be reported to the relevant committee and immediate actions should be taken that is consistent with the wishes and choices, rights, and dignity of the complainant. The complainant should be given information in simple and clear terms on the steps for filing complaints and the possible outcomes, the timelines, and the types of supports available to be able to make informed decision.

For SEA/H cases, it is important to ensure that access to the complaints processes is as easy and as safe as possible for the complainant survivor. The recording of incidence should be limited to the nature of complaint put exactly in the words of the complainant, the age of the

survivor and if to the best of their knowledge, the perpetrator was associated with the project. The complainant should decide on whether they would like to be referred to the grievance committee and the complainant should give consent to share basic monitoring data.

Safety & Well-Being: The safety of the survivor shall be always ensured including during reporting, investigation, and the provision of victim assistance. Those involved in the management of complaints will need to consider potential dangers and risks to all parties (including the survivor, the complainant if different the subject of the complaint, and the organizations involved), and streamline ways to prevent additional harm in all the complaint handling process. The survivor is never to blame for reporting an act of SEA/H and should never be made feel investigated. On the contrary, it is important that she/he feels that her story is heard, believed, and valued. The actions and responses of the complaint mechanism will be guided by respect for the choices, needs, rights, and the dignity of the survivor.

Confidentiality: The confidentiality of complainants, survivors, and other relevant parties must be always respected. All SEA/H-related information must be kept confidential, identities must be protected, and the personal information on survivors should be collected and shared only with the informed consent of the person concerned and on a strict need-to-know basis.

Survivor-Cantered Approach: All prevention and responses action will need to balance the respect for due process with the requirements of a survivor-centred approach in which the survivor's choices, needs, safety, and wellbeing remain at the centre in all matters and procedures. As such, all actions taken should be guided by respect for choices, needs, rights and dignity of the survivor, whose agency and resilience must be fostered through the complaint process.

Accessibility and non-discrimination: The mechanism must be accessible to all potential complainants and sufficient information must be given on how to access them, making the complaints process accessible to the largest possible number of people. This includes identifying and instituting various entry points that are both gender and context sensitive. To facilitate incidents reporting and avoid stigmatization, reports from third parties (witnesses, people suspicious or aware of an incident, etc.) must also follow accountability protocols.

11.5. Building Grievance Redress Mechanism Awareness

The PCU Environmental and Social Safeguards Specialist will initially brief all staff of the project office, the Project Steering Committee (PSC), consultants and contractors on the Grievance Redressal Mechanism and SEA/H complaints mechanism of the Project and explain to them the procedures and formats to be used including the reporting procedures.

The project Environmental and Social Safeguards Specialist will brief all project stakeholders on the Grievance Redressal Mechanism of the Project and explain the procedures and formats to be used including the reporting procedures. Awareness campaigns would be conducted targeting project stakeholders to inform them of the availability of the mechanism. The GRM will also be published on the MIC website and those of the implementing partners and the project website and other social media platforms if any. Project/ subproject site boards will be erected on the sites of sub-projects indicating the existence of the mechanism and phone number(s), email(s) and address(es) for further information. The GRM will be translated into local languages if needed.

11.6. Recommended Grievance Redress Time Frame

Table 11-2 presents the recommended time frames for addressing grievance or disputes related to resettlement and compensation. It is anticipated that resettlement/compensation disputes could be resolved at the community or regional levels.

Table 11-2: Proposed GRM Time Frame

Step	Process	Time frame
1	Receive and register grievance	within 24 hours
2	Acknowledge	within 24 hours
3	Assess grievance	Within 2 Days
4	Assign responsibility	Within 2 Days
5	Development of response	within 21 Days
6	Implementation of response if agreement is reached	within 21 Days
7	Close grievance	within 30 Days
8	Initiate grievance review process if no agreement is reached at the first instance	within 30 Days
9	Implement review recommendation and close grievance	within 30 Days
10	Mediation	Within 10 Days
11	Grievance taken to court by complainant	As applicable

11.7. Grievance Documentation and Reporting

Resolved and escalated grievances/cases would be documented daily (as tickets) into the centralized GRM system by the assigned grievance managers at the PCU. The Environmental and Social Safeguards Specialist would exercise oversight over the system and track the resolution of all grievances/cases. Monthly case/ grievance reports will be generated from the system by the Environmental and Social Safeguards Specialist at the PCU and report to the Project Coordinator to inform management decisions. Quarterly reports will also be generated and reported to the MIC as part of the Project's Progress Reporting to the World Bank. Periodic reports will also be generated within a reasonable time frame for stakeholders upon request irrespective of the period (e.g., bi-annual, annual etc.)

The following indicators could be used as monitoring purposes:

- Number of active project complaints and appeals recorded and reported in each institution.
- 90% of grievance redressed claims settled within the specified period.
- 10% of unresolved complaints or disputes during the monitoring period; and
- Comments received by government authorities, women & youth, family, community leaders and other parties and passed to the Project.

12. PUBLIC CONSULTATIONS, PARTICIPATION, AND INFORMATION DISCLOSURE

12.1. Introduction

ESMF preparation included preliminary stakeholder identification, some initial consultations and analysis of the requirements with key stakeholders. The key project stakeholders identified for consultations included government and non-governmental organizations. Stakeholder consultation is a process and should continue through the design stage of the project and ESIA/ EIA and ESMP/ EMP stages. Stakeholder consultation should be carried out throughout the project lifecycle. In line with this, the Project has prepared a standalone Stakeholder Engagement Plan (SEP) including a Grievance Redress Mechanism (GRM). Consultations were undertaken throughout the country to sensitize major stakeholders at the national and regional levels during the preparation of the SL DTP and will continue in all phases of the project.

12.2. Objectives of the consultations

Stakeholder consultations are crucial in the preparation and implementation of the ESMF to specifically achieve the following objectives:

- Provide information about the project and its potential impacts to those interested in, beneficiaries of, or affected by the project, and solicit their opinion in that regard;
- Educate and solicit views from all stakeholders to enhance project implementation mechanisms and processes;
- Manage expectations and reduce misconceptions regarding the project;
- Ensure participation and acceptance of the project by all relevant stakeholders.

12.3. Stakeholders Identified

The stakeholders identified for consultations are as follows:

Project Proponent/Beneficiary

- Ministry of Information and Communication; and
- World Bank

Regulatory Institution

- National Telecommunications Communication

Other Government Institutions

- Universal Access Development Fund
- Directorate of Science, Technology, and Innovation
- National Revenue Authority
- National Civil Registration Authority
- Ministry of Basic and Senior Secondary Education
- Ministry of Technical and Higher Education
- National Youth Commission
- National Commission for Persons with Disability
- National Civil Aviation Authority

Other stakeholders

- Innovation Sierra Leone
- Big Bang World
- Mobile Network Operators (Africell, Orange, QCell)
- Internet Service Providers

12.4. Outcome of Stakeholder Consultations/ Engagement Activities

A summary of the outcome of the stakeholder consultations/ engagement activities is provided in **Table 12-1**. Further details on the stakeholder consultations have been presented in the Appendix as **Appendix 15-6**.

Table 12-1: Summary of Outcome of Initial Stakeholder Consultations

Stakeholder Group	Institutions	Interests and Concerns raised by stakeholders	Meeting Type and Mode of Engagement	Topic of consultations	How concerns were addressed
Government Agencies	• Ministry of Finance (MOF) • Ministry of Information and Communications (MIC) • Directorate of Science, Technology and Innovation (DSTI) • National Telecommunications Commission (NATCOM) • Universal Access Development Fund (UADF) • Bank of Sierra Leone (BSL) • National revenue Authority (NRA) • National Civil Registration Authority (NCRA)	**Interests:** • Welcomed idea for the overall proposed project design as there is huge needs & demand for fast and reliable internet connection in the government offices • Looking for better utilization of existing public finance management related systems (e.g. Integrated Financial Management Information System (IFMIS), Integrated Tax Administration System (ITAS), etc.) • Looking for potential support for digital skills development/capacity building for civil servants and government employees • Looking for potential support for digitalize civil registration/digital ID • Looking for potential support for Digital Finance Services (DFS), and Finance Inclusion Agenda **Concerns:** • Current limited access to electricity in the country. How it could pose challenge on digital transformation agenda in Sierra Leone. • How high costs of data plan could be addressed or improved with the support from the project? • What would be the typical project implementation	Two-day virtual Project Design Workshop with the officials from the relevant Government of Sierra Leone (GoSL) Ministries, Departments and Agencies (MDAs) to discuss the proposed project design and present global best practices in digital transformation (December 2021) Format: virtual workshop	• Presentation of the overall project concept and the proposed project design. • Presentation of global practices in digital transformation. • Sharing the current challenges in digital usage in MDAs. • Feedback from MDAs on the proposed project design • Open discussion, Q&As	The project design team noted all the concerns and indicated that those most relevant to the focus of the objectives will be incorporated to the extent possible.

Stakeholder Group	Institutions	Interests and Concerns raised by stakeholders	Meeting Type and Mode of Engagement	Topic of consultations	How concerns were addressed
		arrangements for such digital transformation project funded by the World Bank? Which Ministry will lead the project implementation (MOF or MIC or others)?			
Government Agencies	• Ministry of Basic and Senior Secondary Education (MBSSE) • Ministry of Technical and Higher Education (MTHE)	**Interests:** • Welcomed idea for the overall proposed project design as there is huge needs & demand for fast and reliable internet connection in the government offices • Strong interests in Digital Skills Development, especially benchmark assessment work to be proposed under the project • Looking for potential support for teachers' digital literacy as well as e-learning for better teaching techniques **Concerns:** • Limited access to stable electricity at schools may hinder maximum impact of digital connectivity at schools • Selection and Priority of school connectivity (if the project supports broadband connectivity at schools) • Sustainability issue for paying recurrent costs after the project closing (if the project provides digital connectivity at schools)	Focused Topic/Theme Discussion on the Digital Skills Development Agenda in Sierra Leone and Digital School Connectivity (December 2021, January 2022) Format: Virtual meetings	• Presentation of the overall project concept and the proposed project design (Digital Skills Development & Digital Connectivity Support (potentially includes school connectivity)) • Sharing the current challenges in digital connectivity and digital skills agenda in Sierra Leone • Feedback from MBSSE and MTHE on the proposed project design • Open discussion, Q&A	
Private and Public Innovation Ecosystem Providers	• DSTI • Innovation SL (private owned innovation hub) • Big Bang World (private sector currently organizing digital training with DSTI)	**Interests:** • Welcomed idea for the overall proposed project design and support for Digital Skills Development and Innovation related learning /training opportunities. **Concerns:** • Project timeline • How project details will be disclosed/informed?	Focused Topic/Theme Discussion on the Digital Skills Development and Digital Innovation Ecosystem in Sierra Leone (April 2022) Format: Virtual meetings	• Presentation of the overall project concept and the proposed project design • Sharing the current challenges in digital innovation ecosystem and job opportunities in Sierra Leone	

Stakeholder Group	Institutions	Interests and Concerns raised by stakeholders	Meeting Type and Mode of Engagement	Topic of consultations	How concerns were addressed
				• Feedback on the proposed project design • Q&A	
Private sector Actors	• Mobile Network Operators (MNOs): Africell, Orange SL, QCell • Internet Service Providers (ISPs): Afcom	**Interests:** • Welcomed idea for the overall proposed project design and technical assistance (TA) support for Broadband Market/ Digital related policy, regulatory framework support activities (including Internet Exchange Point establishment TA) **Concerns:** • Project timeline • To ensure the project's support to open more private sector investment (fair competition and dynamic market)	Focused Topic/Theme Discussion on the Digital Skills Development and Digital Innovation Ecosystem in Sierra Leone (October 2021, April 2022) Format: Virtual meetings	• Presentation of the overall project concept and the proposed project design • Sharing the current challenges and opportunities in Sierra Leone • Feedback on the proposed project design • Q&A	
Vulnerable Groups (Annex for detailed summary of consultation)	• Gender representatives (NGOs, Civil Society Representatives) • Persons with Disabilities (PWDs, Organization of Persons with Disabilities (OPDs) NGOs, special schools, providing digital literacy/skills trainings • National Youth Commission (NAYCOM)	**Interests:** • Welcomed idea for the overall proposed project design which highly mainstreaming digital inclusion agenda and Digital Skills training opportunities • Strong request to support purchase and install Assistive Technology (AT) equipment to support PWDs' access to digital contents (e.g. website reading out equipment, etc.) **Concerns:** • How and where the Digital Skills training opportunities detail will be disclosed • Potential out of pocket expense to participate in the Digital Skills Training • General Access issues (local transportation arrangement especially in rainy seasons, access to a higher floor of the building by stairs, etc.)	1.General Project Design Consultation December 2021 Virtual format with signed language interpreter 2.Focused group interviews (OPDs providing digital trainings, Women with disabilities, NGO, Civil Society representatives, NAYCOM Several meetings in March/April 2022 Virtual format with signed language interpreter in a comfortable/secure environment with facilitator (by WB Social Safeguards team)	• Presentation of the overall project concept and the proposed project design related to Digital inclusion agenda and Digital Skills Development related activities • Sharing the current challenges and opportunities in Sierra Leone • Sharing personal experiences and perspectives (at focus group interviews) • Feedback on the proposed project design • Q&A	

12.5. Key Stakeholder Requirements

Analysis of the main requirements for key stakeholders on the project based on experience from similar projects are presented in **Table 12-2**. The proponents may have to further engage these stakeholders on further requirements relevant to the specific locations and scope of the project components.

Table 12-2: Main Requirements of Key Stakeholders

Stakeholders	Description	Needs and requirements
Project Affected Stakeholders	MDAs, Institutions, secondary cities, offices, youth, community centres	Receive capacity building, improve ICT services to end users, improve quality of education and health services, improve communication, improve governance through e-services Geographic targeting criteria, availability of infrastructure, adequacy of facilities for service (e.g., computer), digital skills training
	Internet Service Providers	Technical support, improve and provide internet services, receive related capacity building
	Start-ups Entrepreneurs Investors ICT businesses	Access financial and technical support and facilities for ICT start up and investment, access support for digital devices and outreach activities, availability of facilities for start-ups Expand business opportunities Outreach and information dissemination on the competition, transparency, selection process, assistance for participants from remote areas, language barriers,
	Farmers, suppliers, MSMEs	Identify new business opportunities, digital skills training, access to information about the services, availability of infrastructure, risk of fraud and theft
Other interested Stakeholders	Line Ministries, public agencies, and their regional offices, providing public services	Digital skills training, access to information, public awareness on ICT, availability of infrastructure, adequacy of facilities for service
	Private Sector (ICT businesses, investors, business associations)	Access to information on project activities, new opportunities in the ICT market, regulatory constraints, synergy with financial and other sectors, digital skills improvement, improvement in government services
	Civil society (NGOs working on environmental and social policy issues, gender, disability, etc.)	Equity, affordability of services, open data and access to information, public awareness on ICT, ethical issues in use of ICT, fraud and cyber security, accessibility of services to persons with disability, digital skill gaps
	Media (private and public)	Project information, awareness, policy and regulatory issues, transparency,
Vulnerable individuals or groups	Women, youth, elderly, persons with disabilities, low-income households, hard to reach rural communities	Accessibility of services, affordability, geographic targeting, digital skills training, selection criteria for training, cultural norms constraining access to digital technologies, risk of fraud and theft

Community Participation

Community participation is vital in ensuring sustainability of any project. Communities affected by the project should be engaged for them to understand the various components of the project for them to identify themselves with it for successful implementation and to derive its maximum benefits. Steps should thus be taken by the Project Implementation Team (PIT) to sensitize and involve the beneficiary communities from the start of the project.

Community leaders – i.e., Chiefs, Opinion leaders and Assembly members – should be involved in decision making processes. Efforts should also be made to identify other groups in beneficiary communities (e.g., children, women, groups, the poor, parents, etc.) as they may constitute the major beneficiary group of the project. These groups should be educated on all

aspects of the GDAP intervention including the benefits, challenges, and financial implications among others. Various methods can be used to achieve this: focus group discussions, public announcements, animation, film shows, drama, and posters are some of the methods that could be used to educate the people.

Citizen Engagement/Education

Project beneficiary communities will be engaged and educated on all aspects of the intended intervention before implementation. The beneficiary communities should be briefed on the project, its objectives, implementation arrangements and delivery mechanisms, benefits, challenges, and financial implications of the intervention. Citizen engagement would be a continuous activity between the community and the project implementers as outlined the citizen engagement plan developed for the SL DTP. To ensure sustainability i.e., ensuring proper maintenance of the facilities the Citizen Engagement (CE) process should continue even after the project is completed.

The MIC, in their coordinating role, will collaborate with the MDAs to disseminate the required information on the project to the beneficiary communities to manage their expectation. Several methods including announcements, animation, film shows, drama and posters are some of the methods that could be used to educate the people. The MIC will disseminate detailed information on COVID-19 educational response interventions. Given the unprecedented changes presented by the COVID-19 pandemic, communication to beneficiaries will largely involve the use of emails, phone calls, and the use virtual channels such as WebEx, zoom as well as chat groups on WhatsApp and Facebook.

Framework for Sub Project Level Consultations

Representative consultations will regularly be held as the need arises for SL DTP related activities at the sub project level. Participants will cut across various stakeholders, and focus groups on the selected communities, i.e., traditional leaders, women, youth, etc. Information obtained during consultations can be used to enhance the SL DTP database and to aid decision making and addressing grievances.

Methods

A team will be constituted from MIC and the Safeguards team to plan consultation meetings at the sub project level. Venue or method for the consultation meetings will be decide upon based on prevailing situation at the time of the meeting. Irrespective of the method of interaction, the meeting will be structured to be interactive, with questions from the communities and answers and explanations from the safeguard consultants, MIC staff assigned for that purpose. The main issues to be discussed would be related to components of the project which may include the following:

- Sensitization on the project and related environmental and social risks and impacts;
- Financial implications of the project;
- Selection criteria for schools;
- Safeguards issues;
- Grievance redress mechanism;
- Monitoring and supervision of project activities;
- Roles of communities in the Implementation of the project.

Stakeholder Engagement and Consultation During COVID-19 Pandemic Era

The Project will prevent the spread of the disease among workers and in project communities by ensuring that all engagements and consultations are guided by the national protocols on COVID-19 pandemic and the guidance provided by the World Bank Technical Note on how to conduct public consultations in a manner that minimizes the spread of the diseases. Specifically, the project's strategy for stakeholder engagement and consultations during the COVID-19 restrictions include the following:

- Avoid public gatherings (taking into account prevailing national restrictions), including public hearings, workshops and community meetings;
- If smaller meetings are permitted, based on national updates on restrictions, conduct consultations in small-group sessions, such as focus group meetings but with appropriate social distancing and safety protocols such as the use of personal protective equipment, handwashing, hand sanitizing etc. If smaller meetings are not permitted, the Project will explore and conduct meetings through online channels, including WebEx, zoom, WhatsApp, Skype, etc.;
- Diversify means of communication and rely more on social media and online channels. Where possible and appropriate, create dedicated online platforms and chat groups appropriate for the purpose, based on the type and category of stakeholders;
- Use traditional channels of communications (TV, newspaper, radio, dedicated phone-lines, and mail) when stakeholders to do not have access to online channels or do not use them frequently. Traditional channels can also be highly effective in conveying relevant information to stakeholders, and allow them to provide their feedback and suggestions;
- Where direct engagement with project affected people or beneficiaries is necessary, such as would be the case of preparation and implementation of Resettlement Action Plans for this project, the project will identify channels for direct communication with each affected household via a context specific combination of email messages, mail, online platforms, dedicated phone lines with knowledgeable operators;
- Each channel of engagement will clearly specify how feedback and suggestions can be provided by stakeholders;
- In an unlikely event that all the above means of communication are not practicable in a particular circumstance, the event will be rescheduled to a later time, when meaningful stakeholder engagement will be possible.

12.6. ESMF Disclosure

World Bank ESF / ESS require continuous engagements with stakeholders during the preparatory and implementation stages of all projects. After incorporating stakeholders' views in all environmental reports for projects, they are made available to project affected groups, local NGOs, and the public at large. Public disclosure of ESIA documents or environmental reports is also a requirement of the Sierra Leone EIA procedures. However, there is no limitation as to the extent and scope of disclosure. Stakeholder consultations have been undertaken in the preparation of this project as well as the ESMF. MIC and PCU in collaboration with EPA will make available copies of the ESMF in selected public places as required by law for information and comments. Public notice in the media should be served for that purpose.

The notification should be done through a newspaper or radio announcement or both. The notification should provide:

- a brief description of the Project;
- a list of venues where the ESMF report is on display and available for viewing;
- duration of the display period; and
- Contact information for comments.

The EPA will assist to select display venues upon consultation with MIC. These would be project sites specific and very much informative to beneficiaries.

12.7. Publication of Scoping Notice and EIA consultations

A scoping notice is expected to be published in the national newspapers as part of the EIA procedures and after project(s)/ subprojects registration with the EPA. The scoping notice will inform the public about the project and will require the public and key stakeholders to table their concerns, suggestions and comments to specific addresses and contacts to be provided in the notice. The public consultations to be carried out at the EIA stage is expected to engage communities/ traditional authorities identified and confirmed to be affected.

13. ESMF Implementation Budget

Budgetary estimates are provided in **Table 13-1** to support the implementation of the environmental and social management framework. The estimated budget is US$ 155,000.

Table 12-3: Estimated Budget to Implement ESMF

No	Activity	Description	Unit Cost US$	Quantity	Total Cost, US$	Total cost SLL ('000)
1.	Project Public Awareness Creation	Stakeholder engagement	10,000	3 events	30,000	390,000
2	ESMF Disclosure	Distribution of documents to key stakeholders and publications in at least two national dailies (public) and one private newspaper	5,000	1 event	5,000	65,000
3	Capacity building for key stakeholders	Training workshop on National and WB ESF requirements, ESMF, ESIA/ ESMP and ARAP/ RAP procedures, social measures and incorporating environmental and social measures etc. in contract documents, audits etc.	5,000	8 trainings	40,000	520,000
6	ESMF implementation	Supervision, Coordination, and reporting	30,000	lump	30,000	390,000
7	Monitoring and evaluation	Hiring of consultants and preparation of reports	50,000	Lump	50,000	650,000
	TOTAL (ESMF IMPLEMENTATION)				**155,000**	**2,015,000**

14. REFERENCES

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Government of Sierra Leone 2017. National Biodiversity Strategy and Action Plan 2017–2026

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Government of Sierra Leone 2010, National Water and Sanitation Policy.

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Government of Sierra Leone 2013. The Right to Access Information Act.

Government of Sierra Leone 1960. Public Health Ordinance

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Statistics Sierra Leone, 2004. Sierra Leone Population and Housing Census

UNDP, 2012. Diagnostic analysis of climate change and disaster management in relation to the PRSP III in Sierra Leone

World Bank Group, 2017. Environmental and Social Framework. International Bank for Reconstruction and Development/The World Bank

World Bank 2005. Poverty Reduction Strategy Paper 1. Government of Sierra Leone.

15. APPENDICES

Appendix 15-1: Criteria for Environmental and Social Screening of Projects to be used by PCU

Environmental and Social Screening Form for Subprojects

Project Name and P-code	
Name of person undertaking the screen:	
Designation:	
Address (Email, Phone number)	
Have you visited the site as part of the screening process? (Yes, No, Not Applicable)	
If yes, Date of site visit	

A. Description of Activity

Nature of Activity	
State the Duration of activity:	
Describe the Scope of Activity:	
State the Region where the activity will be implemented:	
State the Districts and Local Councils where the activity will be implemented:	
Estimated Cost:	
Proposed Date of Commencement of work:	
Expected Completion of Work:	
Indicate if Technical Drawing is required:	

B. Site Characteristics [complete this section if applicable]

No.	Site Characteristics	
1	Adjoining Land Uses or Land Cover	
2	South	
3	North	
4	East	
5	West	
6	Proximity to a natural habitat e.g. wetland, river/stream, wetlands, forest reserves, protected areas etc.	
7	Proximity a residence or any community resource or facility	
8	Proximity to a road	
9	Are there outstanding land disputes within the area?	
10	What is the status of the land holding required by the project (customary, lease, community lands, etc.)?	

C. Risks Identification

If implemented, would the activity Potentially	Yes	No	If Yes, give a brief description	If Yes indicate frequency of occurrence			
				Very Rarely	*Rarely*	*Occasionally*	*Very Frequently*
Air Quality and Noise							
Cause air pollution? 1. generation of dust 2. generation of smoke 3. generate fumes? 4. generate emissions 5. Create objectionable odor affecting people?							
Expose workers or the public to substantial air pollution?							
Cause noise pollution							
Expose persons to excessive vibration and noise?							
Biological Resources and Natural Resources							
Occur in legally protected/nature reserve or Environmentally Sensitive Areas or a legally defined buffer zone; (forest reserves, national parks, Ramsar sites and wetlands, wildlife habitat areas, steep slopes, riparian areas, upland forests, vulnerable aquifers, biosphere reserves, World Heritage Sites, prime agricultural lands?							
Be located within 100m from a protected/nature reserve or Environmentally Sensitive Areas?							
Have effect on neighbouring protected/nature reserve or Environmentally Sensitive Areas (forest reserves, national parks, Ramsar sites and wetlands, wildlife habitat areas, steep slopes, riparian areas, upland forests, vulnerable aquifers and prime agricultural lands?							
Have effect on flora (vegetation or plants)?							
Have effect on fauna (animals, wildlife)?							
Interfere with the movement of any wildlife species or organisms?							
Lead to the clearing of forestlands and woodlands?							
Cause disturbance in natural habitats?							
Lead to modification of natural habitats?							
Drain wetlands, or be sited on floodplains?							
Lead to road construction or rehabilitation, or otherwise facilitate access to fragile areas (natural woodlands, wetlands, erosion-prone areas)?							

If implemented, would the activity Potentially	Yes	No	If Yes, give a brief description	If Yes indicate frequency of occurrence			
Cause disruption of wildlife migratory routes?							
Harvest wetland plant materials or utilize sediments of bodies of water?							
Involve the harvesting of timber resources?							
Involve the harvesting of non-timber resources?							
Lead to increased hunting or the collection of animals or plant materials?							
Increase the risks to endangered or threatened species?							
Accelerate erosion by water or wind?							
Reduce soil fertility and/or permeability?							
Involve removing renewable natural resources such as forest products?							
Involve the extraction of non-renewable natural resources?							
Affect dry season grazing areas and/or lead to restricted access to a common resource?							
Water Quality and Hydrology							
Occur within 100m distance from the nearest water body or drainage channel?							
Involve water extraction or abstraction from rivers, lakes, groundwater							
Have effect on potable water supplies to communities?							
Potentially contaminate surface water and groundwater supplies? • by generating liquid waste? • by generating liquid with human or animal waste? • by generating liquid with pH outside 6-9 range? • by generating liquid with an oily substance? • by generating liquid with a chemical substance? • by generating liquid with odor/smell?							
Lead to changes in the drainage pattern of the area, resulting in erosion or siltation?							
Lead to increase in surface run-off, which could result in flooding on or off-site?							
Increase runoff, which could exceed the capacity of existing stormwater drainage?							
Increase potential for flooding?							
Potentially pollute or contaminate surface water?							

If implemented, would the activity Potentially	Yes	No	If Yes, give a brief description	If Yes indicate frequency of occurrence			
Potentially pollute or contaminate groundwater resources?							
Affect existing stream flow, reduce seasonal availability of water resources?							
Hazardous Waste and Materials - *Will* the activity							
Lead to the generation of hazardous waste such as: • Solvent-based paints, • Pesticides and other garden chemicals, Batteries (for example car, mobile phone or regular household batteries) • Motor oils (Petrol, kerosene, lubricants for vehicles), • Cleaning and polishing chemicals, Pharmaceuticals (all medicines), • Electronic waste (unwanted computer equipment – monitors, keyboards, laptops, CD, disc drives, phones, batteries, solar panels, meters, Laser and printer inkjet cartridges, Fluorescent tubes and compact fluorescent globes (CFLs)) • Medical waste?							
Lead to the transportation of hazardous waste?							
Lead to the recycling of hazardous waste?							
Lead to the storage and disposal of hazardous waste?							
Lead to the generation of Hazardous industrial waste (HIW)? HIW includes used oils, solvents, paint, batteries, soiled packaging, aerosols, cosmetics, pharmaceuticals, phytosanitary products, industrial sludge.							
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement							
Require changes to existing land tenure system?							
Require acquisition of land (public or private, temporarily, or permanently) for its development?							
Potentially cause or aggravate land-use conflicts?							
Restrict land rights or land use rights?							
Restrict access to natural resources that cause a community or groups within a community to lose access to resource usage where they have traditional or customary tenure, or recognizable usage rights?							
Lead to the physical displacement?							

If implemented, would the activity Potentially	Yes	No	If Yes, give a brief description	If Yes indicate frequency of occurrence			
Physical displacement occurs when individuals or communities are fully or partially no longer able to occupy an area and must relocate to a new location due to project activity.							
Lead to economic displacement? *Economic displacement occurs when individuals or communities are fully or partially restricted in their access to land or resources that are important to their livelihoods and economic well-being*							
Cause a disruption on Power or other utility supply?							
Affect livelihood opportunities of people?							
Labor Issues							
Involve the use of direct workers? *Direct workers are people employed or engaged directly by the Borrower (including the project proponent and the project implementing agencies) to work specifically in relation to the project.*							
Involve the use of community workers? *Community workers are people employed or engaged in providing community labour.*							
Involve the use of contracted workers? *contracted workers are people employed or engaged through third parties to perform work related to core functions of the project, regardless of the location.*							
Involve the use of primary supply workers? *Primary supply workers are people employed or engaged by the Borrower's primary suppliers.*							
Involve the use of Children?							
Social Inclusion							
Cause the exclusion of migrants, poor, persons with disabilities, youth, women, men?							
Cultural Heritage							
Involve excavations, demolition, movement of earth, flooding or other changes in the physical environment?							
Be located in, or in the vicinity of, a recognized cultural heritage site?							
Affect culturally important sites in the community such as sacred areas, burial grounds or cemeteries?							

If implemented, would the activity Potentially	Yes	No	If Yes, give a brief description	If Yes indicate frequency of occurrence			
Affect religious sites shrines, temples, mosques, churches?							
Affect any archaeological or historical site?							
Community Health and Safety							
Lead to labour influx? *Labour influx consists of the rapid migration to and settlement of workers in the project area, typically in circumstances where labour/skills and goods and services required for a project are not available locally. Projects also stimulate speculative influx ("followers"), including those seeking employment or enterprises hoping to sell goods and services to the temporary project workforce, as well as "associates" who often follow the first two groups to exploit opportunities for criminal or illicit behavior (e.g. prostitution and crime).*							
Create conditions that can lead to community health problems such as community exposure to health risks and vector-borne diseases, communicable diseases, injuries, nutritional disorders, HIV/AIDS and infectious diseases?							
Lead to increased road traffic, vehicles or fleets of vehicles for the purposes of the activity?							
Involve the use of Security personnel?							
Lead to increased GBV and SEA risks?							
Other Areas							
Production or use in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone depleting substances, PCB's, wildlife or products regulated under CITES.							
Production or use in weapons and munitions.							
Production or use in alcoholic beverages (excluding beer and wine).							
Production or trade in tobacco							
Gambling, casinos and equivalent enterprises.							
Production or trade in radioactive materials.							
Production or use of unbonded asbestos fibres.							

D. Risks Classification

Based on the risks identified in section C the risks areas should be categorized as Low Risk, Moderate Risk or High Risk:

Risk areas	Low Risk (Risk that can impact on a small scale)	Moderate Risk (Risk that can cause an impact but not a serious one)	High Risk (Risks that can cause result in huge impact)
Air Quality and Noise			
Biological Resources and Natural Resources			
Water Quality and Hydrology			
Agricultural and Forestry Production			
Hazardous Waste and Materials			
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement			
Socio-economic, Livelihood and Labour			
Social Inclusion			
Community Health and Safety			

Overall proposed activity risk classification: ……..

E. Recommendations for Instruments to be prepared

Recommendation:	Tick as appropriate	Justification
No further instrument required		
Requires the preparation of:		
Environmental and Social Impact Assessment (ESIA)		
Environmental and Social Management Plan (ESMP)		
Resettlement Action plan (RAP or ARAP)		
Environmental and Social Audit		
Hazard or Risk Assessment		
Social and Conflict Analysis		
Cultural Heritage Management Plan		
Biodiversity Management Plan		

F. National Requirements

No.	If implemented, would the activity require permit or approval from the following national regulatory agencies?	Yes	No	Justification
1	Environmental Protection Agency			
2	Forestry Division			
3	National Water Resources Management Authority			
4	Sierra Leone Standards Bureau			
5	National Telecommunications Commission			
6	Ministry of Health and Sanitation			
7	Municipal and District Councils			

G. Clearance

Approval's	
Name:	
Signature:	
Date:	

Appendix 15-2: Chance Find Procedures

1. INTRODUCTION

Both national regulations and World Bank Environment and Social Standards especially, ESS8: Cultural Heritage, recognize the importance of cultural heritage for current and future generations. Though project sites are not yet known, the project design suggests that there will be no impacts on cultural resources. However, the excavation for laying fiber optics could have an impact on unknown cultural heritage such as grave sites and sacred sites.

Therefore, the purpose of this chance find procedures is to provide MIC and other parties to the project with the appropriate response guidelines to be applied if previously unknown cultural heritage is encountered. This Chance Find Procedure considers international best practices such WB ESS8, 1972 UNESCO Convention on the Protection of World Cultural and Natural Heritage (World Heritage Convention) and Sierra Leonean policies and laws for cultural resources protection. Thus, Chance Find Procedures (CFPs) are part of the E&S instruments that may have relevance during Project implementation. The Procedure applies to potential cultural heritage objects features or sites identified because of construction activities in the project area and its surroundings.

2. DEFINITIONS

A chance find procedure is a project-specific procedure that outlines actions to be taken if previously unknown cultural heritage is encountered. It is also defined as potential cultural heritage (or paleontological) whether movable or immovable objects, sites, structures, group of structures and natural features and landscapes that have archaeological, historical, religious, and other cultural significance. Cultural heritage recourses may include:

- Artefacts, whole or partial, such as ceramic sherds, stone items, glass fragments, bone, shell, metal, textiles, and plant and animal remains.
- Feature associated with human occupation such as trash dumps, middens, hearths, structural remains.
- Prehistoric or human remains found in formal graves, cemeteries, or as an isolated occurrence.

Non- Cultural Heritage Chance Finds many include modern objects, features, and burials and the decision about whether a Chance Find is a cultural heritage resource requiring additional treatment will be made by the PCU in consultation with the Ministry of Tourism and Cultural Affairs where necessary.

3. PROCEDURES

If any person discovers a physical cultural resource, such as (but not limited to) archaeological sites, historical sites, remains and objects or a cemetery and/or individual graves during excavation or construction, the following procedures shall be applied:

1. If the Contractor discovers archaeological sites, historical sites, remains and objects, including graveyard and /or individual graves during excavation or construction, the Contractor shall:
    - Stop the construction activities in area of the chance find.
    - Delineate the discovered site or area.
    - Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or National Museum takes over.
    - Notify the Environmental and Social Safeguard Specialist (ESSS) who in turn will notify responsible local or national authorities in charge of the Cultural Property i.e. the National Monuments and Relics Commision-NMRC (within 24 hours or less).
    - Relevant local or national authorities would oversee protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage, those include the aesthetic, historic, scientific or research, social and economic values.
    - Decision on how to handle the finding shall be taken by the responsible authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archaeological importance) conservation, preservation, restoration, and salvage.
    - If the cultural sites and /or relics are of high value and site preservation is recommended by the professionals and required design changes to accommodate the request and preserve the site.
    - Decisions concerning the management of the finding shall be communicated in writing to relevant authorities.
2. Construction works could resume only after permission is granted from the responsible local authorities concerning safeguarding of the heritage.

4. DOCUMENTATION

The ESSS will ensure that contractors and sub-contractors staff maintain records of monitoring, Chance Finds and it will include:

- Daily monitoring records indicating areas and activities monitored, report Chance finds and the results of any evaluations.
- Weekly reports summarising reporting period activities including Chance Finds, assessment and evaluations, internal and external communications and instructions and supporting photographic documentation (or other reference material as appropriate). An additional report aimed at fulfilling any specific Ministry requirements is also anticipated.
- Monthly reports summarising monitoring and evaluation results, status of any site treatment measure requiring instructions to contractor(s) sub-contractor(s), and other

internal and external communication. Additional monthly reporting may be required by the respective MDA.

5.CULTURAL HERITAGE TRAINGING

All proposed project personnel are required to receive and comply with the Code of Conduct and receive training and demonstrate competency in (1) the identification of Chance Finds cultural heritage sites, objects, or features and (2) Chance Finds Management Procedure, that is those actions that are required in the case of suspected Chance Find. This training will be incorporated into the overall induction process for firms, contractor (s), and sub-contractor (s) personnel and will include a quick reference hand-out. All employees must be aware of the Sierra Leonean Policies and Laws on cultural heritage and WB ESS 8 that forbids disturbance or removal of cultural heritage objects offsite for personal gain. Disciplinary action should be taken against any personnel who violate this requirement.

6.REPORTING AND COMMUNICATION

Monitoring, review and reporting will be along with the conduct of ESIA/ESMP/ESMF and RAP/ARAP for the proposed project. Contractor (s); Sub-contractor (s) shall report all records on observational monitoring, protection measures, complaints, and damages to the ESSS on monthly and quarterly basis. The ESSS shall report their monitoring records and the Contractor's records to MIC which will in turn inform relevant authorities e.g., NMRC on case-to-case basis and on a quarterly basis.

7.IMPLEMNETATION ARRANGEMENTS

The implementation arrangement and responsibilities of the Chance Find Procedures shall be as follows:

No.	STAKEHOLDER	RESPONSIBILITY	RESPONSIBLE PERSON
1	MIC/PCU	-Overall coordination - Lead consultation with relevant authorities and local communities -Implement the procedure and provide required funds. - Monitoring the implementation of chance finds procedures and - Prepared required reports.	ESSS
2	Contractors and Sub-Contractors	-Stop the construction activities in the chance find -Install temporary site protection measures; and -Inform the client and document chance finds.	Site engineer/Site foreman
3	MTCA/NMRC	-Verification of chance finds -Approval of the treatment measures; in consultation with stakeholders. -provide the authorisation to resume works in the chance find area	In charge of tourism, culture, relics and monuments
4	Local Communities	-To attend consultation meetings. -To provide required information. -Participate in treatment measures	Local Population

8. BUDGET

The budget will depend on the chance finds and the proposed treatment measures. However, a provisional sum has been provided in the main ESMF implementation budget.

9. CONCLUSION

The present Chance Find Procedures serve as international best practice policy for the accidental discovery of heritage resources and provide the framework to handle them. Based on the definitions provided within this document and the proposed procedures of communication and handling chance finds, MTCA will be able to deal properly with the accidental discovery of heritage resources throughout the various phase of the project implementation especially during the construction phase.

Appendix 15-3: E-waste Management Procedures

1. INTRODUCTION

The World Bank Environment and Social Standards especially, ESS3: Resources Efficiency and Pollution Prevention and Management, and national regulations safeguards the proper management and disposal of waste generated or produced through project activities. The goal is to reduce waste generation, practice waste reuse, recycle and recovery during project implementation. A construction project of this nature will generate electronic waste (e-waste).

Therefore, the purpose of this electronic Waste Management Plan (eWMP) is to provide the MIC/PCU, its contractors and sub-contractors with the appropriate response guideline to apply in managing waste generated. This waste management procedure considers international best practices such as WB ESS3, 2015 United Nations Sustainable Development Goal 11 target 11:6 and the Sierra Leonean policies and laws on waste management (although an e-waste management policy does not exist).

3. ABOUT WASTE MANAGEMENT

MIC and other parties to the project commit to reducing the amount of waste generated by its activities and contractors will minimise waste at the source as much as possible. All parties shall minimise and manage waste generation through the implementation of the waste hierarchy. Energy recovery will also be considered. Even though waste disposal is the last option, it is appropriate for waste that is hazardous and can cause harm to people and the environment. This waste will be well labelled, stored, handled, treated, and disposed of.

3.WASTE MANAGEMENT PROCEDURES

Until the e-waste management policy is developed, the project will refer to e-waste management procedures adopted by the Bank, including for waste collection, storage, transportation, and treatment. The policy (the development of which will be supported by the project), will entail procedures for dealing with Collectors, Collection Centers, Treatment Facilities and Final Disposal issues. Generally, the MIC/PCU in ensuring sound management of e-waste will ensure that e-waste collectors and most especially third parties are registered with the EPA, and ensure all staff to handle e-waste have appropriate training provided by EPA and other competent bodies. The ESSS in the PCU will also ensur the waste is stored in such a way that it is not exposed to direct sunlight and rainfall, so that it is easy to process for re-use, depollution, or recovery if not adversely affected. Furthermore, the PCU shall collaborate with the EPA to ensure the e-waste is transported, stored, and handled in a manner adequate to minimize damage as well as not mix it with any other type of waste. Disposal measures prescribed by the EPA and other competent bodies shall also be strictly followed. Likewise, the MIC/PCU and their contractors will ensure all e-waste transfers will be accompanied by waste transfer documentation, of which a copy will be retained by the waste producer. The waste transfer note or document shall accompany every transfer of waste generated (see table 1).

Table 1: Waste Transfer Note

Waste Transferor							
Waste	Quantity	Packaging	EWC Code	Description of waste	Waste Producer		Date
					Name	Signature	
Comment:							
Waste Transferee							
Waste	Quantity	Packaging	EWC Code	Description of waste	Waste Transferred By		Date
Comment:							

4.AUDITING

An officer will be assigned by contractors to do a day inspection to ensure that e-Waste Management Procedures are duly followed. Also, the ESSS within the PCU will be required to carry out routine audits during project implementation.

5.REPORTING AND COMMUNICATION

Details of the quantity of waste generated and management approach applied by all parties will be recorded and submitted to the EPA and other relevant bodies. This information will be reported along with the conduct of ESIA/EIA, ESMP/EMP and RAP/ARAP for the proposed project.

6.IMPLEMENTATION ARRAGEMENT

The implementation arrangements and responsibilities of the e-WMP is presented below:

NO	Stakeholder	Responsibility	Responsible Person
1	MIC/PCU	-Overall Coordination -Lead consultation with relevant authorities -Implement the procedure and provide required fund -Monitoring the implementation of waste management procedures; and -Prepared reports.	ESSS
2	Contractors	-Practical application of the eWMP; -Hazardous and non-hazardous waste report; and -Waste transfer and management documentation.	Health, Safety and Environment officer
3	EPA	-Permit for disposal of hazardous waste	EPA

7.BUDGET

The budget for implementing the ESMP covers activities to be taken to implement this plan.

Appendix 15-4: Terms of Reference (ToR) for Preparation of ESIA for Sub-Projects

Preparation of ESIA for Sub-Projects

Introduction

A brief introduction indicating the purpose of the ToR which is to select a consultant to conduct the ESIA for the project

Background

An introduction to the project will be given with description of overall objective of project. Details of the project description may be given including any designs which may be attached in an annex.

Objectives

A statement to be made confirming intention to comply with all relevant national and international environmental requirements in order to meet legal and corporate obligations and to ensure a sustainable project as well as disclosure

Consultant's scope of works

All tasks to be performed by the consultant are clearly given:

Description of the proposed project

The Consultant to present a description of the proposed project components in sufficient detail as is consistent with the EIA process including maps at appropriate scales to illustrate the general setting of project-related development sites.

Legislative and Regulatory Considerations

The Consultant to identify and briefly discuss the pertinent regulations and standards governing environmental quality, health and safety, protection of sensitive areas, protection of endangered species, CITES, etc., at international, national, regional and local levels.

Description of the Baseline Environment

The Consultant will assemble, evaluate and present baseline data on the environmental characteristics of the study area. The baseline shall cover mainly the natural/bio-physical environment as well as the socio-economic/cultural characteristics.

Determination of the Potential Impacts of the Proposed Project

The Consultant will assess the impacts from changes brought about by the project on the relevant baseline environmental conditions as described above under Task above.

Analysis of Alternatives to the Proposed Project

The Consultant shall include an analysis of reasonable alternatives to meet the ultimate project objective. This analysis may suggest options that are more sustainable from an environmental, (i.e., natural resource, socio-cultural and economic) point of view than the originally proposed project. The analysis will include the "no action" or "no project" alternative.

Public Consultations process or Stakeholder involvement

The consultant will follow formal and Informal meetings, focus group discussion and public forum in the preparation of the ESIA

Development of Environmental Management Plan (EMP)

An Environmental Management Plan (EMP) shall be prepared by the Consultant for the project. Components of the EMP should include monitoring, documentation, evaluation, prediction, warning, prevention, control and reduction of impacts identified in the ESIA. It will include proposed work programs, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the mitigating measures.

Identification of Institutional Needs to Implement Environmental Assessment Recommendations

The consultant will carry out a review of the authority and capability of institutions at local, regional, and national levels and recommend steps to strengthen them so that the management and monitoring plans in the environmental assessment are likely to be implemented.

Development of a Monitoring Plan

The Consultant will prepare a detailed plan to monitor the implementation of mitigating measures and the impacts of the project during construction and operation phases. The plan will include an estimate of capital and operating costs and a description of other inputs (such as training and institutional strengthening) needed to conduct it.

Output of assignment and deliverables

The environmental assessment report should be concise and limited to significant environmental issues. The contents of the environmental assessment report should be according to the outline below:

- Title Page (list of consultants who prepared EIA)
- Executive Summary
- Description of the Proposed Project
- Policy, Legal and Administrative Framework
- Description of the Environmental Baseline
- Assessment of Significant Environmental Impacts
- Mitigation Management Plan
- Analysis of Alternatives
- Consultation with Stakeholders
- Environmental Management Plan (EMP)
- Institutional Arrangement and Capacity Building Needs for the Implementation of the EMP.
- Monitoring Plan
- List of References
- Appendices:
    - Records of Inter-Agency and Public/NGO Communications and Engagements
    - Data and Unpublished Reference Documents
    - Photo Documentation

Consulting Team

The Consultant should provide a team with demonstrable skills for interdisciplinary analysis required of a high level ESIA.

Schedule

Timelines for submission of reports and completion of assignment to be given.

Appendix 15-5: GRM Forms

Grievance Information Form

Date/Time received:	Date: (dd-mm-yyyy) Grievance ID #: Time: □ am □ pm	
Name of Grievant:		□ You can use my name, but do not use it in public. □ You can use my name when talking about this concern in public. □ You cannot use my name at all.
Company (if applicable)		□ You can use my company name, but do not use it in public. □ You can use my company name when talking about this concern in public. □ You cannot use my company name at all
Contact Information:	Phone: Email address: Address: Location: (Kindly indicate the preferred language and method of communication)	
Status of Occurrence	□ One-time incident/complaint □ Happened more than once (indicate how many times): _____ □ Ongoing (a currently existing problem)	

_____ _____
Grievant/Complainant Signature (if applicable) Date (dd-mm-yyyy)

_____ _____
Project personnel Signature (to confirm receipt only) Date (dd-mm-yyyy)

For PCU use only:
Grievance No: _____
Grievance Category:
□ Problems during material transport □ Smell
□ Blocked road access □ Problem with project staff
□ Dust □ Other (specify): _____
□ Noise

Grievance Owner/ Department: _____
Grievant/Complainant Signature (if applicable)

Grievance Acknowledgement Form (GAF)
The project acknowledges receipt of your complaint and will contact you within 10working days.

Grievance ID #: Date of grievance/complaint: (dd/mm/yyyy)	
Name of Grievant/Complainant:	
Complainant's Address and Contact	

Information:	
Summary of Grievance/Complaint: (Who, what, when, where)	
Name of Project Staff Acknowledging Grievance:	
Signature:	
Date: (dd/mm/yyyy)	

Annex - Disclosure/Release Form

Grievance ID #:	
Name of Grievant/Complainant:	
Date of Complaint:	
Summary of Complaint:	
Summary of Resolution:	
Resolved at:	□ First Level □ Second Level □ Third Level
Date of grievance resolution (dd/mm/yyyy):	

Grievant/Complainant Signature (if applicable) Date (dd-mm-yyyy)

Project personnel Signature (to confirm receipt only) Date (dd-mm-yyyy)

Grievance Redressal Registration Monitoring Sheet

No.	Grievance ID #.	Name of Grievant/Complainant	Date Received	Grievance Description	Name of Grievant Owner	Action(s) to be taken	Responsible Unit	Due Date	Result(s) of Intervention	Closing Date of Complaint

Appendix 15-6: Summary of Stakeholder Engagement Activities

Date	Person interviewed, organization	Focus of interview	Questions asked	Feedback received
May 31, 2022	Daniel Kaitibie, Director-General, NATCOM	• Current situation with broadband market policy and regulation (actions taken/being taken, barriers, opportunities, expectations) • Current situation with digital skills development (actions taken/being taken, barriers, opportunities, expectations) • Potential environmental and social risks and impacts due to the above activities	What is the current situation with broadband market policy and regulation, and digital skills development in your sector? What adverse impacts could result from activities you will be implementing under this subcomponent?	• Various regulations passed: for SIM registration in 2020. License regulation in 2020, quality of service regulation in 2020, type approval regulation in 2020, and radio frequency spectrum regulation in 2020. • Need for a policy on mobile money, national roaming, infrastructure sharing infrastructure sharing reduces tower litter and aesthetic pollution • Need for a policy to have a singular fibre system, and to regulate tariffication/billing • A third party (SALCAN) currently conducts a quality-of-service survey monthly, which should be improved through a network monitoring system through support from SLDTP • Expectations/challenges: NATCOM needs serious capacity strengthening (digital skills training for staff and ISPs) • Many staff have qualifications that are misaligned with the jobs they do. • Capacity needs are alarming, and the ACC systems review picked that up. Need to realign staff or train. • Africa Finance Cooperation (AFC) looking to develop staff capacity • Project should enable the design of a national frequency allocation plan and a network monitoring system • The available spectrum vehicle can only scan 2G and 3G, needs to be updated to scan 4G and 5G • Looking to do a cost study to guide tariffs for MNOs • A comprehensive access gap survey needed to identify key barriers and gaps and policies needed to improve regulation for bridging those gaps. • If projects fibre component is funded, physical displacement and environmental impacts will be likely.

Date	Person interviewed, organization	Focus of interview	Questions asked	Feedback received
May 31, 2022	Ms Massah Momoh, Director General, UADF	• Current situation with creating last mile connection access (actions taken/being taken, barriers, opportunities, expectations) • Current situation with enhancing inclusive access for underserved communities • Current situation with increasing resilience of the digital environment • Potential environmental and social risks that would result from project implementation	What is the current situation with creating last mile access, enhancing inclusive access, and increasing resilience of the digital environment? What adverse impacts could result from activities you will be implementing under this subcomponent?	• UADF focused on creating last-mile connection and enhancing inclusive access for unserved and underserved communities • No infrastructure yet (0.75% levy mobilised last year and this year from MNOs) to erect low-cost solutions in underserved communities • Selected three communities for the pilot phase (one in the south, east, and north) • Infrastructure entails a solar satellite-based solution different from traditional masts erected by MNOs • Need to procure digital devices to operationalise the infrastructure to encourage use • Expectations: SLDTP could help to expand infrastructure, provide digital devices, and provide trainings (which are needed for inclusive access). • Looking to conduct a comprehensive access gap survey to be done in collaboration with NATCOM and DSTI (to identify where resources like that promised by WB should be directed). Useful for guiding connections by MNOs and ISPs. • Environmental impacts are likely but insignificant because once UADF constructs a tower, it would have the capacity to harbour systems for MNOs and reduce current littering by towers
June 1, 2022	Mr Sheku Kanneh, Ag. Director, EPA	• Current situation with e-waste management	How far along are you with the development and implementation of a policy for e-waste management?	• No policy on e-waste management; looking to develop one to regulate quantity and impact • Concerned about increasing influx of used electronic items that are at the end of their life cycle and composed of heavy metals • Waste materials are imported through eco-levies that indicate they are meant for charities, but they end up in the streets for sale • Existing EPA legislations are inadequate for tackling the problem • Study planned to provide a holistic understanding of primary sources, product types, key sinks, and environmental impacts

Date	Person interviewed, organization	Focus of interview	Questions asked	Feedback received
				• EPA could be inspired by FCDO paper on producing national e-waste management policies.
June 1, 2022	Mr Victor Abu Kargbo Sesay, Director of Technology, MTHE	• Current situation with digital skills development in the education sector	How far along are you with the development of digital skills in the higher education sector? What adverse impacts could result from activities you will be implementing under this subcomponent?	• Curriculum for ICT is outdated; need urgent review; technology sections in the curriculum are great but the tools that are practical for what students learn (e.g., a computer lab) is non-existent • Need for hands-on training. Computer labs must be available; mode of instruction needs to be 50% hands-on • Digitalization reforms are underway- management structure of schools being revised, operational reforms are happening to introduce a learning management system (which allows staff to update their records digitally, including grades) • All applications across higher education institutions are now digital. Working toward making payment of tuition fees digital (this will be done in collaboration with MNOs) • Web-based platform developed at IPAM was recently used for student elections • There is still a vehement resistance from staff at universities to digital reforms • MMCET signed an agreement with Blue Crest recently to train staff. Location of some campuses and staff willingness to participate are among key barriers to the ongoing reforms • There is a 5-year MTHE strategy-2020-2025 that has a technology component. • No donors so far- WB project will be the first support toward government's digitalization efforts in the Technical and Higher Education sector • Rolling out reforms in 11 Government Technical Institutes, intending to add 6 more later this year • No environmental and social impacts observed
May 30, 202	Ms Sonia Karim, Head of Cabinet Secretariat	• Current situation with digital government services and systems	What is the current situation with government services and systems and the infrastructure for such purposes?	• Cabinet has gone digital since 2015 • New cabinet manual (processes) developed since 2016- funded by DFID (spells out all the things we want to see in a new cabinet-efficiency, timeliness, etc • Seeking to reduce the paper load

Date	Person interviewed, organization	Focus of interview	Questions asked	Feedback received
		• Current situation with government services delivery infrastructure and networks	What adverse impacts could result from activities you will be implementing under this subcomponent?	• Cabinet now holds virtual meeting, and the Secretariat is exploring the possibility for meetings hosted in the provinces • Have an e-cabinet platform (supports ministries through the cabinet process, from proposal development to presentation. • The platform allows multiple users to access files and work at the same time; • The infrastructure (for the platform to be fully secure not available • Need to use MIC's dedicated server to protect files and increase efficiency • Financial problems are a major barrier to creating and maintaining customised domain names for uses of the platform (using .gov email addresses for instance) • Government server has problems because of capacity etc • Bandwidth provided is slow, so meetings are not always run effectively • Need to digitize records to improve record management (but the Secretariat worries they might run into maintaining the .gov problem). • Running e-cabinet effectively will depend on the existence of infrastructure at MIC. • Improvements will enable citizen access (needed to inform decisions with data and evidence) • Seeking to establish a web-based library, a repository for cabinet-based research • Working towards weekly press briefings to enhance wider access and transparency. people need to know what decisions have been taken and how far along government is with delivery • Working towards web-based monitoring and evaluation plans • SLDTP is a great opportunity for finishing ongoing reforms, and necessary because WB has been the biggest partner for public reforms in the country • Environmental and social impacts are negligible

Date	Person interviewed, organization	Focus of interview	Questions asked	Feedback received
June 2, 2022	Mr Mumeen Jalloh, Director of Communications, MIC	• Recent reforms that may be pertinent to the project • Proposed GRM mechanism • Proposed budget for ESMF implementation	Have any reforms taken place, or are additional reforms proposed that the project may scale or learn from? Do you have any concerns about the GRM proposed for the project and the budget proposed for implementing the ESMF?	• No reforms to report • GRM is simple to follow and adequate for the approaches and outcomes proposed for the project • The ESMF budget is on the high side. Only 1 ESS Specialist will be hired. • Will check with Kaoru to know if the budget cannot surpass a certain threshold, but it is fine as proposed. It will be much lower if the salary for the Safeguards Staff is removed.

Appendix 15-7: Generic ESMP for SLDTP

No.	Parameter	Anticipated E &S Impact	Proposed Mitigation Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency /Timing	Budget/ Year (US$)	Consultation
Pre-Construction (Planning/Design) Phase									
1.	designs for works	lack of consideration for universal access Lack of consideration for climate screening and climate smart designs Inadequate stakeholder consultation on designs	• Follow stakeholder Engagement plan to engage relevant stakeholders including vulnerable groups in the design. Consultant to include universal and climate smart designs in works. Designs should be validated by PCU and project E&S specialist. •	bidding documents	• stakeholders consulted in works designs • Designs consider universal access and climate smart designs	Social Safeguards Specialist (PCU)	before finalizing designs	As part of consultant' s cost	Stakeholders to consult: Landlords, Project Affected Persons, communities and relevant Government and Non-Government Institutions
1.	Land Acquisition and Compensation	Anxiety from potential loss of lands/ livelihood/ shelter/ assets or relocation	• Sensitization and awareness creation on each sub-projects to ensure that potentially affected individuals and communities are adequately informed, in advance, of the scope, magnitude and schedule of the proposed project, its implications for the construction period. • These measures will minimize the problems of confrontation and conflicts and will reduce this impact significantly. • Ensure that communities are informed of any changes in the project design that may affect their status as affected persons.	Community entry training and skill, Social safeguard training and skills	• Minutes or report of awareness creation meetings • Number of Complaints. • Records of complaints/grievances resolved/ unresolved • Evidence of acceptable compensation paid • Cultural/ archaeological resources/ existing infrastructure encounter incidence register • Alternative Livelihood Restoration Program	Social Safeguards Specialist (PCU)	Weekly	As part of regular operations	Stakeholders to consult: Landlords, Project Affected Persons, communities and relevant Government and Non-Government Institutions

No.	Parameter	Anticipated E &S Impact	Proposed Mitigation Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency /Timing	Budget/ Year (US$)	Consultation
			• Ensure all grievances/concerns by local communities, traditional authorities, are resolved prior to construction works to avoid conflicts. • Compensation for loss of permanent structures and assist to relocate other properties. • PAPs provided with livelihood assistance or assisted to get new jobs immediately without any loss of income. • Identify cultural heritage resources and existing ecologically sensitive areas. • PAPs could be considered for unskilled labour where possible as alternative livelihood • Provide psycho-social counselling to PAPs to prepare them for relocation/resettlement • Implementation of RAP prior to commencement of works						
Construction Phase									
1.	Temporal disruption of businesses due to trenching	Loss of customers and income	• Planning of work to out of business peak hours to minimize inconvenience to businesses	Social safeguard	• Complaints from businesses invoking GRM.	Contractor/ Design Consultant/ Project Engineer/EPA/ PCU	Monthly/ regular checks by contractor	As part of duties of Contractor	Stakeholders such as businesses, Landlords, Project affected Persons, communities
	Recruitment of contractor workers and	Discriminatio n on recruitment, lack of	• Contractor to adapt project LMP as part of contractor ESMP.	ESS 2	• Contractor ESMP includes LMP • signed by all workers	Contractor	Monthly	As part of contractor ESMP	Contractor workers

No.	Parameter	Anticipated E &S Impact	Proposed Mitigation Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency /Timing	Budget/ Year (US$)	Consultation
	working conditions	protection for vulnerable workers, Poor working conditions, lack of mechanisms for resolving worker grievances	• Clear recruitment processes and granting opportunities to local and vulnerable workers to the extent possible • Clear written and understood terms of employment consistent with the LMP • Contractor to institute workers GRM		• All workers have written terms of employment • Worker GRM funtioning				
2	Site clearing and excavation works	Loss of vegetation cover and biodiversity	• Carry out vegetation clearance in phases and limit clearance to portions of the land to be developed at a particular time to avoid exposure of the soil and loss of flora and fauna. • Avoid unnecessary exposure or access to sensitive habitat. • Regular inspection or monitoring should be carried out in sensitive areas during construction works.	Engineering	• Vegetation intact at inactive sites of project area • Presence of sensitive habitat at project area. • Number of trees around project area. • Increased in area of land cultivated.	Contractor/ Design Consultant/ Project Engineer/EPA/ PCU	Monthly/ regular checks by contractor	As part of duties of Contractor	Stakeholders such as Landlords, Project affected Persons, communities and relevant Government and Non-Government Institutions
3.	Site clearing and excavation works for manholes/ pits/ platforms etc. Laying of fibre optic cables. Transportatio n of materials and equipment.	Soil degradation and sediment transport	• Carry out appropriate landscaping to preserve soils and vegetation cover. • Control excavation works to limit the area and sized to be affected. • Stabilize loose soil by dampening to avoid sediment transport into drains and water bodies. • Carry out soil analysis to determine the present chemical conditions of the soil within the project. This is to identify the baseline soil properties to make recommendations on the type	Engineering	• Area and size of gullies formed • Amount of silt deposited in watercourses. • Observable change in turbidity of water in drains/water bodies • Observable oil sheen drains/water bodies.	Contractor/ Design Consultant/PCU/ Project Engineer	Daily	To be captured in Bill of Quantities (BoQ)	Stakeholder should include: Contractor, Design Engineers, Project Engineers, Project Communities, EPA.

No.	Parameter	Anticipated E &S Impact	Proposed Mitigation Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency /Timing	Budget/ Year (US$)	Consultation
			and rates of application of various soil nutrients. This will allow for the right nutrient replenishment to improve the soil.						
4.	General construction activities. Generation and Disposal of construction spoil and waste.	Water quality deterioration	• Do not discharge any garbage/refuse, oily wastes, fuels/waste oils into drains or water bodies to prevent water pollution. • Fuel storage tanks/sites should be properly secured to avoid spillage and release into water bodies. Provide bund wall to guard against potential spillage from fuel tanks. • Adopt erosion control measures. • Provide drums or containers for temporarily storage of spent or waste oil from vehicles and equipment to avoid releasing into water bodies. • Ensure proper storage and handling of fuels, oil, wastes, and other potentially hazardous materials; • Regularly monitor suspected or known sensitive areas and ensure they form part of the project/ subproject activities; • Project activities should avoid disturbance of habitat or sensitive areas	Water quality testing analysis training and skills	• Concentration of water quality parameters e.g. turbidity, oil & grease, TDS etc. • Area and size of gullies formed. • Presence and number of waste oil containers on site • Records on waste oil collection and disposal	Project Engineers	Monthly	To be captured in Bill of Quantities (BoQ)	Stakeholder should include: Contractor (s), Design Engineers, Project Engineers, Project Communities, water quality specialist, EPA.
5.	Site clearing and	Emissions and Air quality	• Purchase sound equipment/ machinery for project to minimize the amount of air	Air quality and noise levels testing and	• Presence and use of PPEs.	Contractor/Desig n	Daily	To be captured in Bill of	Stakeholder should include:

No.	Parameter	Anticipated E &S Impact	Proposed Mitigation Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency /Timing	Budget/ Year (US$)	Consultation
	excavation works Demolition of existing facilities applicable) Transportation of materials and equipment	Deterioration and Increased Noise Levels	pollutants released to the environment; • Operate well maintained engines, vehicles, trucks and equipment to ensure the air is not overly polluted; • Use good quality fuel and lubricants; • Suppress dust generation at project sites by spraying water; • Switch off engines of vehicles/ trucks and earth-moving equipment when not in use. • Deliver construction equipment and materials to the construction sites outside busy days in communities such as market days. • Dampen untarred routes of vehicles/trucks to the construction sites. • Haulage trucks carrying sand should be covered with tarpaulin. • Hydraulic concrete mixing machines should be used as much as possible and regularly service all construction equipment and machinery.	analysis and skills training (proper handling of equipment)	• Number of Complaints. • Records of complaints/grievances resolved/ unresolved • Baseline air quality and noise data	Engineers/Project Engineers		Quantities (BoQ)	Contractors, Design Engineers, Project Engineers, Project Communities, air quality and noise specialists, EPA
6.	All construction activities	Generation and disposal of waste	• Provide adequate waste reception facilities at construction/work camp sites; • Dispose of waste at Metropolitan/ Municipal and District Assembly approved waste dump sites	Engineering	• Availability and use of bins • Records on frequency and location of waste disposal site of domestic and construction waste • Records on training	Contractor/Design Consultant/PCU	Monthly or quarterly	As part of duties of Contractors To be captured in Bill of	Stakeholder should include: Contractor, Design Engineers, Project Engineers,

No.	Parameter	Anticipated E &S Impact	Proposed Mitigation Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency /Timing	Budget/ Year (US$)	Consultation
			• Provide training as part of the ESMP/ EMP awareness creation on waste management.					Quantities (BoQ)	Project Community, Waste Management Engineer, EPA, and District Assemblies.
7.	All construction activities	Occupational Health and Safety Issues	• Cover buckets of trucks carrying construction materials such as sand, quarry dust, etc. • Use road worthy vehicles/trucks and experienced drivers/operators; • Active construction areas to be marked with high-visibility tape; • Backfill and or secure open trenches and excavated areas; • Provide adequate sanitary facilities; • Provide PPEs for construction workers; • Educate construction workers on site rules/regulation and hygiene and disease (HIV/ AIDS and COVID-19) prevention. • Only qualified and certified workers shall be employed to install, maintain or repair any equipment on site • First aid kits will be kept on site whenever there maintenance activities. • Use suitable Personal Protective Equipment (PPEs)-	Vehicle maintenance/ skills training, OHS Training	• Workers' awareness of Contractor's health and safety policy • Availability and proper use of PPEs • Availability and proper use of warning signs • Availability of first aid kit • Adherence to health and safety procedures • Records on frequency, type and source of illness/accident/injury • Records on non-compliances	Contractor/Design Consultant	Daily	As part of duties of Contractors. To be captured in Bill of Quantities (BoQ)	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Community, EPA, and MDAs

No.	Parameter	Anticipated E &S Impact	Proposed Mitigation Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency /Timing	Budget/ Year (US$)	Consultation
			Train all construction workers in safe methods of working.						
8.	Conveyance of construction materials.	Traffic Impacts	• The MMDAs should be informed at least seven days before start of work. • The public should be informed of the proposed works through local FM stations • Warning signs should be provided at junctions to Project sites to indicate the approach of trucks. • Transport of materials will as much as possible be carried out during off-peak traffic hours to minimise the impact on traffic in project communities. • Ensure that all the vehicles to be used for the project and especially in transporting equipment and materials will be serviced regularly and all the drivers to be engaged/ assigned would be required to hold the requisite driver's license as prescribed by the Drivers and Vehicles Licensing Authority (DVLA) • All temporary traffic controls should be done in consultation with the respective road agencies and the Police Motor Transport and Traffic Division (MTTD); • Haulage of materials including quarry products to the site should be limited to off-peak hours;	Traffic assessment skills/training	• Change in condition of roads to project site • Availability and use of diversion/road signs or trained persons directing traffic. • Records of accident occurrence involving truck drivers • Frequency of truck breakdowns along road • Records of parking at unauthorized places • Complaints of over speeding by Project vehicles	Contractor/ Construction Supervisor/ Environmental and social Safeguards Specialist	Daily	As part of duties of Contractor. To be captured in Bill of Quantities (BoQ).	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MDAs

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			• Trucks transporting quarry products and other friable materials to the site should be covered; • Engage very experienced drivers for the project; • Traffic wardens should monitor dump truck movements and ensure public and traffic safety; Speed limits of between 20-30 km/hour will be allowed along the construction routes. Where possible, attach speed limit sign to vehicles • In an unfortunate incident of any truck failure, such trucks will be towed within 24 hours.						
9.	All construction phase activities	Public health impacts and SEA/SH Risks	• Organize, in collaboration with the respective MMDAs Health Directorates, awareness creation seminars and educational programs for all workers and the surrounding communities on the behavioural changes required to prevent the spread of HIV/AIDS and other STDs as well as COVID-19 • Ensure that the contractor covers all trenches or excavations, other than the laterals/sub-laterals made for construction to prevent accidents and collection of stagnant water which could breed mosquitoes. • Ensure the contractor provides adequate waste bins at the	OHS Skills/Training SEA/SH prevention and response	• Records of HIV/AIDS and COVID-19 awareness creation seminars and educational programs for all workers and the surrounding communities • Availability and use of warning signs and cautionary tapes around excavations and other working areas • Availability of bins and record of frequency of dislodgement of sewage • Records on frequency and type of	Project engineer/Contractor/ Construction Supervisor/ Environmental Safeguards Specialist	Onset of project Daily	As part of duties of Contractors To be captured in Bill of Quantities (BoQ)	Stakeholder should include: Contractor, Design Engineers, Project Engineers, Project Community, EPA, and MDAs

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			project site for use to minimise indiscriminate disposal of plastic and polythene material, cans and food waste by the workers. These bins will be frequently transported and emptied at approved MMDAs dump sites. This will prevent the littering of the project site with cans and bottles which could collect water and breed mosquitoes and other vermin. • Ensure the contractor provides temporary toilet facilities at the project site for use by the construction workers. The workers will be educated against "free range" defecation. • Well costed contractor SEA/SH Action Plan adapted from the project GBV Action Plan • rollout of GBV-sensitive procedures for the GRM, • SEA/SH code of conduct for contractor and workers, • worker and community training, • referral pathway to service providers and accountability and response framework. •		incident/accidents involving public • Contractor SEA/SH Action plan approved • Workers SEA/SH code of conduct signed by all • SEA/SH sensititve GRM and Referral pathway to service providers in place • Accountability frameworks in place				
10.	All construction phase activities	Change in socio-cultural characteristics	• Use local labour as much as possible and where readily available. • Identify cultural heritage resources and existing ecologically sensitive areas.	Social safeguard skills/training	Complaints from project communities. Reports on chance finds	Project Engineer(s)/contractor(s)	Daily	As part of duties of Contractors, and Safeguards Specialist	Stakeholder should include: Contractors, Design Engineers,

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			• Ensure the contractor(s), together with opinion leaders such as the Assembly Member and traditional leaders, sensitise migrant workers on societal norms, taboos and other cultural practices in the subproject area. • The Contractor(s) shall be required to submit to the approval of the Engineer a social and cultural orientation plan for all staff.						Project Engineers, Project Communities, EPA, and MDAs.
Operation Phase									
1.	All project operations	Soil degradation and sediment transport	• Monitor soil conditions around facilities. This is to identify the present state of the soil and to make recommendations. • Provide bund wall to guard against potential spillage from fuel tanks. • Adopt erosion control measures to minimize erosion and sediment transport from the facilities. • Dispose of waste at District Assembly approved waste dump site • Create an exclusive zone around project facilities.	Engineering	• Area and size of gullies formed. • Results of soil test (Texture; pH; organic carbon; total nitrogen; available phosphorus; available potassium; exchangeable cations like Ca, Mg, Na, K; CEC) • Number of site waste bins • Final disposal records.	Soil Scientist/ Environmental, Health, Safety & Security Officer	Onset of project and subsequentl y biennially Weekly checks	0.00	Stakeholder should include: Contractor, Design Engineers, Project Engineers, Project Communities, EPA, and MDAs
2.		Water quality deterioration	• Maintenance and cleaning of vehicles, trucks and equipment should take place offsite and at a designated washing bay; • Provide toilet facilities for workers.	Water quality testing of near-by water bodies	• Physicochemical parameters • Bacteriological parameters • Pesticide residue parameters	Environmental Consultant/	Spot checks/ Monthly/ Biannual tests and analysis (Major and minor season)	0.00	Stakeholder should include: Contractor, design engineers, project engineers, project

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			• Dispose of waste oil through recognized oil marketing company or approved agent. • The provision of bunds around the proposed project facilities will hold water and reduce transport of soil sediments through erosion by runoff. • Regularly maintain the wastewater/ runoff drains through de-silting and weed clearance to allow waste water released from the project facilities flow freely out of the facilities						community, EPA, and District Councils.
3.	All project operations	Waste Generation, management and disposal	• Waste must be properly disposed of in order to avoid creating public nuisance. • No waste should be disposed of on public roads and must be kept within boundaries of the project site. • Solid waste desilted from the drains, during maintenance, must be dumped at approved dumpsites. • Provide adequate bins on the project facilities for the collection of plastic and polythene material such as drinking water sachets used by workers for proper disposal at approved dump sites or for recycling. • Ensure bins containing used containers are stored safely and are securely under cover prior to their safe disposal and	Waste management engineering	• Availability and use of bins for collection of plastic and polythene material • Availability and use of separate labelled bins • Records on disposal of plastic and polythene material (frequency and location of disposal site) • Toilet facilities provided in the field for workers	NPCT	Weekly	0.00	Stakeholder should include: Contractor, design engineers, project engineers, project community, EPA, and District Councils.

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			that they should not be used for other purposes.						
4.	All project operations	Occupational Health and Safety (OHS) Issues	• Ensure all staff are trained on appropriate use and handling of equipment and machinery. • Provide staff with first aid training, including on accidents and how to administer first aid health care in the event of any accidents • Appropriate PPEs such as gloves, nose masks, coveralls, goggles, safety boots, etc. will be provided for staff. • Monitor particulate matter ($PM_{2.5}$ and PM_{10}) emissions from generator sets to ensure that they do not exceed 35µg/m^3 and 70µg/m^3 respectively • Comply with the requirements of the Nuclear Safety and Radiation Protection Authority (NSRPA) to ensure that at subproject base stations whole body exposure shall not exceed 1.2 /cm-sq at 1800-2000 MHz and 0.6 W/cm-sq for systems operating at 900 MHz • Safety procedures, particularly with the operation of machines and their handling will be enforced and sanctions applied when not adhered to.	OHS assessment skills/training	• Workers' awareness of health and safety policy • Availability and proper use of PPEs • Availability and proper use of warning signs • Availability of first aid kit • Adherence to health and safety procedures • Records on frequency, type and source of illness/accident/injury • Records on non-compliances and evidence from GRPB. • Records on training and awareness creation on health and safety	PCU	Weekly	0.00	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MDAs
5.	All project operations	Public health impacts SEA/SH risks	• Monitor particulate matter (($PM_{2.5}$ and PM_{10}) emissions from generator sets to ensure that they do not exceed	Health Assessment and Auditing	• Health records (type, frequency and causes of diseases/illnesses)	PCU	Daily	0.00	Stakeholder should include:

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			$35\mu g/m^3$ and $70\mu g/m^3$ respectively • Engage and comply with the requirements of the NSRPA to ensure that at base stations whole body exposure shall not exceed 1.2 /cm-sq at 1800-2000 MHz and 0.6 W/cm-sq for systems operating at 900 MHz • Waste must be properly disposed of to avoid creating public health nuisance. • Provide and enforce the use of separate labelled bins for the collection and disposal of used containers and waste. • Illustrative warning signage and indicators will be provided to warn about proximity to project/ subproject facilities. • Monitor compliance with project GBV Action Plan		• Illustrative warning signage and indicators provided to warn about proximity to project/ subproject site/ facilities • Security in place near project facilities				Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MDAs
6.	All project operations	Change in socio-cultural characteristics	• Ensure the contractor (s), together with opinion leaders such as the Assembly Members and traditional leaders, sensitise workers on societal norms, taboos and other cultural practices in the area. • The Contractors shall be required to submit to the PCU for approval of the social and cultural orientation plan for all his staff.	Contractor labour policy	• Records of meetings • Grievance records	Contractors/ PCU	monthly	0.00	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MDAs

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			• Use local labour as much as possible and where readily available						
Decommission Phase									
1.	Demolition of facilities/structures	Occupational/ Public safety and traffic	The contractor will be required to ensure that: • PPEs are provided to workers involved with decommissioning of facilities. • toilet facilities are available throughout the decommissioning period. • workers still have access to public toilet facilities in the communities or can be conveyed to such facilities where needed if mobile toilet facilities have been relocated. • final movement of vehicles and equipment comply with approved speed limits within the communities. • all community complaints are resolved before handing over project facilities	Engineering	• Availability and proper use of PPEs • Adherence to health and safety procedures • Records on frequency, type and source of illness/accident/injury	Contractor	• Daily	No additional cost required aside BoQ	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MDAs

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2.	Demolition of facilities/ structures	Waste disposal	• Ensure that any remaining waste streams created during construction activities and waste generated during decommissioning activities are collected from the project sites properly disposed before handing over the project. • Inspect the site to ensure that the contractor has properly cleaned up all construction sites before final payment is made to the contractor.	Engineering	• Availability and use of bins • Records on frequency and location of waste disposal site of domestic and construction waste	Contractor/ PCU	Daily	No additional cost required aside BoQ	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MDAs
Total Cost Estimate for Monitoring								**0.00 (TBD)**	