ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

(INCLUDING RESETTLEMENT FRAMEWORK)

FOR THE

WESTERN AFRICA REGIONAL DIGITAL INTEGRATION PROJECT (WARDIP)-SOP2

(P500628)

THE REPUBLIC OF LIBERIA

DECEMBER 1, 2025

DRAFT
ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

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Introduction

In 2011, Liberia commissioned its first submarine telecommunication cable, which marked a transformative moment in the country's connectivity landscape. The Africa Coast to Europe (ACE) cable, which landed at the Monrovia Cable Landing Station in Central Monrovia, facilitated a dramatic reduction in international bandwidth costs, enabling improved mobile and internet services. However, access gaps persist, especially in rural and coastal regions, and internet affordability remains a barrier to large portions of the population. Recognizing these challenges, the Government of Liberia, through the Ministry of Posts and Telecommunications (MoPT), and with support from the World Bank, through the West Africa Regional Digital Integration Project (WARDIP) SOP2, intends to install a second submarine fiber-optic telecommunication cable system.

Project Description

The Liberia component of WARDIP-SOP2 will be implemented under the following key components:

- Component 2: Connectivity Market Development and Integration – Supports design and deployment of submarine cable systems and landing station infrastructure, spectrum management, and regulatory reforms to enhance connectivity and resilience.
- Component 3: Data Market Development and Integration – Builds cybersecurity, data protection, and sovereign multi-cloud infrastructure to secure cross-border data flows.
- Component 4: Online Market Development and Integration – Promotes digital entrepreneurship, financial inclusion, and digital skills, particularly among women and youth.
- Component 5: Project Management and Implementation Support – Strengthens MoPT's PIU capacity, including E&S management, citizen engagement, and grievance redress.

Purpose and Scope of ESMF

Preliminary analysis and screening conducted during the project development phase via the World Bank Environmental and Social Standards and Liberia's Environmental & Social Impact Assessment / Strategic Environmental Assessment (ESIA/SEA) Procedural Guidelines (2021) identified potential environmental and social risks associated with the project activities (see table overleaf). Based on this preliminary screening and low-moderate E&S implementation capacity of the Borrower, the overall potential E&S risk associated with the Liberia project was deemed Substantial. It is against this backdrop that it was proposed to develop a detailed environmental and social management framework (ESMF)[1] for identifying, predicting, minimizing and managing potential negative impacts and ensuring sustainable development. An ESMF is used for potential future sub-projects or components whose locations are not yet known, establishing processes and procedures to ensure compliance with environmental and social safeguards. This ESMF is a

[1]ESMF provides a framework for managing potential environmental and social impacts when the exact locations and details for future sub-projects or facilities are not yet determined at the time of program/project design and preparation. It sets out the policies, procedures, and institutional arrangements to ensure that future projects within a program will be screened for environmental and social risks and managed in accordance with relevant safeguard policies.

structured approach that provides guidance for managing environmental and social impacts of project activities through:

- Screening and categorizing subprojects,
- Preparing site-specific environmental and social risk management instruments (ESIAs/ESMPs, RAPs, etc.) and other E&S safeguard sub-plans (e.g., GAP, SMP, TMP, etc.) developed for the project,
- Monitoring, reporting, and stakeholder engagement, and
- Strengthening institutional capacity, governance and coordination for E&S risk management.

This ESMF complements related instruments prepared for the Project, including Preliminary Environmental and Social Study (PESS)[2], Resettlement Framework (RF), included as part of this ESMF, and a standalone robust Stakeholder Engagement Plan (SEP).

Key Environmental and Social Risks

Environmental Risks:

- Disturbance to marine/coastal habitats and near-shore fisheries during cable routing, landfall, and vessel operations during the construction and installation phase. Seabed disturbance will result in displacement or disturbance of flora and fauna. Sediment alteration will lead to increased turbidity. Release of contaminants into the marine ecological system from ploughing and cable laying equipment and ship. During beach excavation and diver jetting (if needed), sediments will be temporarily displaced and redistributed, which will cause some temporary turbidity. Equipment or vessels may release petroleum hydrocarbons or other hazardous materials into the environment.
- Ecological and biodiversity risks at sensitive areas (reefs, mangroves, turtle nesting beaches) resulting from cable routing and installation activities.
- In terrestrial environments, risks will emanate from construction-related activities. These will manifest as changes to topography or geology of the immediate area of the proposed cable system at the landing site; potential erosion as a result of trenching and excavations; generation of hazardous material and waste; construction nuisances and safety hazards from terrestrial ducting/road works (e.g., dust, noise, vibration, traffic conflicts, utility strikes, erosion/runoff/sedimentation). Project vehicles and equipment for staging, excavation and site restoration on or at the beach are unlikely to pose any permanent adverse effect on a designated scenic vista. - Construction phase (during installation activities, excavation, drilling, boats and vessels may provide an additional, temporary source of noise above ambient levels at the project area). Also, during the operation phase it is expected that noise emissions will come from running of vessels and equipment, and the running of backup electric power generators may cause noise nuisance to nearby communities. Impacts of noise during the construction phase are expected to be short-term, localized and temporary, and therefore are not considered significant. However, long-term noise impacts may be associated with the running of vessels, machinery, vehicles and equipment during the operation phase. Emissions to air are expected to be minimal and temporal. Generally, impacts during the construction

[2] TACTIC 2025. Preliminary Environmental and Social Assessment Report for the Installation of a Second Submarine Cable in Liberia.

phase are expected to be short-term, localized and temporary, and therefore are not considered significant.

- Water use may occur during construction and installation of landing stations and other ancillary facilities onshore, albeit not excessive. It should not impact adversely on the local communities, other users and the environment. On the contrary, energy use is expected to increase as the Liberia project intends to procure equipment, including a substantial amount of IT equipment (e.g. computers, servers) that will be run using lead-acid batteries and diesel-fueled backup generators for electricity for maintenance and operation of the system. Besides, the operation and maintenance activities may also result in the generation of electronic wastes (e.g., nickel-cadmium batteries and printed circuit boards from computer and other electronic equipment as well as backup power batteries). Service vehicles may also result in the generation of used tyres, and waste oils and used filters. Furthermore, transformer equipment may potentially contain PCBs while cooling equipment may contain refrigerants such as ODSs.
- Improper handling of wastes and hazardous materials (fuels/oils, drilling fluids if HDD, batteries) and end-of-life e-waste during construction and operational phases.
- Damage to cultural heritage resources (CRC) in both the marine and terrestrial environments is a possibility.
- Climate hazards (flooding, storm surge, heat) affect facilities and service continuity.

Social Risks

The social risks associated with the project are considered moderate. These are summarized as follows:

- Land acquisition/servitudes for landing stations, ducts, or towers and temporary livelihood impacts (fishers during exclusion zones; roadside vendors during trenching). The risk of land acquisition will result in physical displacement and disruption of economic activities and livelihoods. Restriction of access for use of the marine environment such as for fishing, farming (seaweed farming), recreation (e.g., swimming, diving, boating, etc.) will negatively impact livelihoods and be a form of economic displacement.
- Worker OHS and labor risks across marine and terrestrial landscapes: During excavation, construction, and operation activities, workers will be exposed to aboveground and underground electric power lines and (electrical safety) other utilities. Specific hazards may be encountered during marine works (diving, deck operations, lifting, mooring), confined spaces, electrical hazards in data centers and so on. Other health and safety issues will include exposure to radio frequency (RF) and electromagnetic fields EMF), optical fiber safety (during installation, inspection, maintenance and repair), fall from working at heights/elevated and overhead work (during installation, inspection, maintenance and repair), motor vehicle safety/traffic and driving (during frequent use of ground transportation for maintenance and repair activities), working long hours (especially during cable excavation and laying, maintenance and repairs), contractor oversight and primary-supply risks. Production of submarine fiber-optic telecommunications systems such as cables or other components of telecommunication equipment may be associated with a number of unsustainable practices such as labor rights violations, poor working conditions, absence of clean production standards etc.

- Community health and safety (construction traffic, beach/near-shore safety, fuel storage, disruption to utility services (electricity, water), equipment failure and structure collapse, use of public/private security); potential health effects from electromagnetic frequency (EMF) and radiofrequency (RF) exposure, electrical hazards; exposure to health and safety hazards due to structural failure of masts or towers and trespass. Impacts on priority ecosystem services (such as spawning grounds, recreation, etc.), increased vulnerability and safety-related risks due to land use change or loss of natural buffer areas, and health-related risks and impacts due to degradation of natural resources may result in adverse health and safety risks and impacts to the affected communities. The risk of exposure to diseases, including communicable diseases from the influx of project labor to the project area may even be differentiated and higher sensitivity of vulnerable groups.
- The project may not induce the need for massive worker influx, and housing at the project site or immediate project area. However, potential threats identified related to labor and working conditions (e.g., discrimination, forced labour, child labour, worker occupational health and safety), community health and safety risks, gender-based violence, sexual exploitation and abuse, or harassment. These are, however, perceived to be on the low side and may be easily managed.
- As telecommunication improves, more drivers may resort to the use of cellular phones exposing them to traffic accidents.
- Digital exclusion of women, youth, and remote users.
- SEA/SH risks at worksites and community interfaces.
- Cybersecurity breaches and attacks, e.g., AI, resulting in disruption of services or leading to the loss of sensitive data from millions of users, data privacy, and consumer protection risks in new digital services.

Mitigation and Management Measures
Environmental

- Disturbance to marine and coastal habitats and biodiversity: Actions will include ensuring that all project installation activities occur on the selected route and on the beach or roadside where soil has been previously disturbed. Best management practices (BMPs) will include avoidance of sensitive areas, appropriate scheduling of cable-laying activities to minimize the potential impacts on sensitive species, implementing Marine Protected Species Protection Protocols by an onboard observer during cable installation phase. On terrestrial and onshore landscapes ensuring that disturbed spaces and sites are progressively restored to maintain the existing topography and beach profile. Ensuring that all project installation activities occur on the selected route and on the beach or roadside where soil has been previously disturbed. BMPs will include avoidance of sensitive areas, appropriate scheduling of cable-laying activities to minimize the potential impacts on sensitive species. Implement Marine Protected Species Protection Protocols by an onboard observer during installation phase.
- To mitigate risks to CRC, the project will include a chance find procedure in all contracts related to construction awarded under the project. As a measure of avoiding disturbance to CRC, the project will ensure that no damage through debris disposal or noise pollution is caused at any sites of cultural significance including rocks, sacred groves or wetlands. In

the event that cultural heritage resources are discovered, the project will institute the chance find procedures developed for this project and designed to protect previously unknown cultural heritage resources, like archaeological artifacts, by immediately stopping all work in the vicinity, cordoning the area, notifying a designated authority, and securing the area until a qualified specialist can assess the find and determine the next steps. Also, the project will enlist the participation of a qualified archaeological monitor during seabed and beach excavation activities in the cable corridor. Where activities must be undertaken near a cultural heritage site, the following measures should be taken: (i) Train/make the construction contractor aware of how to deal with these sites and ensure that there is supervision from contractors' side for the management of all such sites; (ii) Restore all sites to their original shape post construction. It is advisable to take photographs, measurements, etc. of the CRC if working in the same location, in case it needed for future reference while restoring the site; (iii) Identify most appropriate time to undertake construction to minimise disturbance, e.g. avoid any special prayers/festivals for constructing in the vicinity of the CRC or on its access route; (iv) Avoid keeping power backup systems such as generators near the CRC, identify appropriate sites for waste storage and disposal of any waste generated by the project activity, and appropriate sites for material storage.

- Construction nuisances and safety hazards: Project vehicles and equipment for staging, excavation and site restoration on or at the beach are unlikely to pose any permanent adverse effect on a designated scenic vista, therefore no mitigation measures or best management practices (BMP) are necessary. In the case of emissions of harmful pollutants into the air, it is recommended to adopt best management practices (BMP) by maintaining construction equipment and vehicles in proper working order to reduce air emissions. The BMP relevant to noise impacts is by ensuring that equipment shall be maintained in proper working order, especially all noise suppression systems, if applicable. In addition, it is important to leave vehicles, heavy machinery and equipment idling.
- Water and energy use, and pollution prevention actions will include: (i) adopting feasible water conservation measures; (ii) providing alternatives; (iii) providing secondary containment and overfill prevention for fuel storage tanks; (iv) procuring electronic equipment that meets international phase out requirements for hazardous materials content; (v) establishing a working agreement with a certified/licensed e-waste facility for e-waste collection, transport, recycling, and dismantling of generated e-waste under the project; (vi) carrying out sensitization campaigns among local authorities, operators of electronic devices, repairs for e-waste collection, and transport to a certified e-waste collection centers; (vii) implementing standard best management practices and spill prevention measures to reduce the potential for release of hazmats; (viii) improving management of refuse and general site management to prevent materials from entering drainages or the ocean; (ix) putting in place spill prevention and response plans for vessels and site management of equipment fluids; (x) implementing safety plans specific to the work area to prevent accidental spills.

Social

- Occupational Health and Safety (OHS): Mitigation measures against occupational health and safety risks under the project will include implementing actions such as eliminating

the potential hazards entirely and substituting or replacing a hazardous material or process with a less hazardous one, isolating workers from the hazard through physical changes like replacing PCB refrigeration with non-PCB-containing cooling system, changing the way people work, such as implementing safe work procedures or limiting exposure time, and providing personal protective equipment (PPE)), providing comprehensive training, Foster an environment where safety is a core value for everyone, from leadership to frontline workers, conducting risk assessments and audits, establishing a strong safety culture, clearly posting safety information (safety handbooks, and hold regular training sessions), and using technology for hazard monitoring.

- Land Acquisition and Restrictions to Land Use and Resources: Management actions will include (i) avoiding involuntary resettlement or, when unavoidable, minimizing involuntary resettlement by exploring project design alternatives, such as relocating cable route, manhole and landing stations to areas where human access is unavailable. (ii) mitigating 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 relocation assistance (includes transportation, food, shelter, and social services, cash allowances to defray cost of moving and lost workdays); 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; (iii) Improving living conditions of displaced persons, the project will provide alternative sources of livelihood, adequate access to services and facilities nearby or elsewhere; (iv) ensuring that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected will be carried out. The Borrower is not required to compensate or assist those who encroach on the project area after the cut-off date for eligibility, provided the cut-off date has been clearly established and made public.
- To mitigate against risks associated with cultural, social and economic activities (community health and safety), the project will (i) develop a Labor Management Plan (for labor management) and Security Management Plan (protection from equipment vandalization or theft); (ii) ensure strict enforcement and monitoring of labor standards, and establishment of effective grievance redress mechanisms at various levels; (iii) employ traffic control for public safety; (iv) all project-related accidents and near-misses will be duly recorded, and all needed actions complied with; (v) the contractor will appoint a health and safety officer; (vi) employ robust stakeholder engagement; (vii) employ transparent land acquisition processes, livelihood restoration measures, grievance mechanism; (viii) Cconstruction workers should be provided with and forced to wear suitable Personal Protective Equipment (PPE); (ix) provide clear signage near project sites to warn trespassers; (x) barricade and backfill excavations in busy community areas; (xi) provide alternative routes for communities to still utilize their areas.
- SEA/SH risks at worksites and community interfaces:
- Traffic accidents: Mitigation measures against accidents in fiber-optic telecommunication cable laying and operation will include using personal protective equipment (PPE), proper cable handling and routing, and implementing strict safety protocols like risk

assessments, clear communication, and proper equipment maintenance. Additional measures will involve installing protective devices and ensuring proper grounding for operational safety and managing the work environment by controlling access and warning the public.

- Digital exclusion of women, youth, and remote users: Mitigating digital exclusion involves a multi-faceted approach, including formulating appropriate government policies, community-based programs, partnerships, and inclusive design. Key strategies include improving affordability and access to devices and internet, providing digital skills training, and creating user-friendly digital services that consider the needs of all users, such as those with disabilities or low literacy.
- Cybersecurity breaches and attacks: To mitigate cybersecurity attacks, implement a multi-layered defense strategy that includes technical controls (e.g., use of like firewalls, strong passwords, multi-factor authentication, and data encryption), and robust administrative and procedural measures (e.g., performing regular software updates, backups and security audits, employee security training to recognize threats like phishing, securing network by segmenting it and controlling access, and instituting well-defined security policies and incident response plans).

Implementation Arrangements

Institutional Framework

The institutions with a legal mandate and responsibility for the preparation and implementation of the ESMF are listed below.

- ✔ Environmental Protection Agency (EPA). The EPA is mandated to set environmental quality standards and ensure compliance with pollution control and management measures. It is responsible for the development of guidelines for the preparation of Environmental Assessments and Audits, and the evaluation of environmental permits. These may include certification procedures for landfills and other activities potentially dangerous to the environment. The EPA is also established to coordinate, monitor, supervise, and consult with relevant stakeholders on all activities related to the protection of the environment and the sustainable use of natural resources. It has an Inter-Governmental Steering Committee whose responsibility is to review, approve, and clear the RAP. The Committee is comprised of the Environmental Protection Agency (EPA), Ministry of Mines and Energy (MME), Ministry of Finance and Development Planning (MoFDP), Ministry of Agriculture (MoA), Liberia Land Authority (LLA), and Ministry of Health (MOH), with each institution providing its expertise based on applicable Liberian laws and international best practices.
- ✔ Liberia Land Authority (LLA). The Liberia Land Authority (LLA) was established with the passing of the LLA Act by the Legislature in October 2016. The LLA has the legal mandate for land administration in Liberia. The Land Authority controls and manages, in the interest of equitable development, access to and use of Public and Government Land except for Reserves, Protected Areas, Proposed Protected Areas, and Diplomatic Missions. The Land Authority functions include administering the deed registry and land registry systems; establishing standards and regulating survey and mapping services; administering public survey and mapping services, and the national cadaster, promoting and regulating the proper development of private surveying profession, and therefore

under no condition shall a surveyor or other staff of the Authority engage in the survey of private land or in the survey of communal land in a private capacity; value land and buildings for the Authority's land registry system; implement programs in support of property rights, including those of customary land owing communities; and adjudicate disputes arising in the context of systematic land registration. Land use and management functions include promoting, supporting, and ensuring the development of land use management plans and zoning schemes and their implementation through counties, districts, and other local government structures (clans, etc.).

- ✔ Ministry of Finance and Development Planning (MFDP). As the principal authority on fiscal and development planning and executing agency of GoL development programs from fiscal standpoint, the MFDP will sign off on the loan agreement and oversee financial management services through its Project Financial Management Unit (PFMU) which is responsible for fiduciary management of World Bank-supported projects. It will support the project to prepare a consolidated work plan and budget for the project on an annual basis. The work plans and budgets will include planned expenditures under each component The MFDP will lead on project negotiation between the Government of Liberia and the World Bank.
- ✔ Liberia Revenue Authority (LRA). For land and asset verification, the LRA will play a critical role in verifying and confirming the value of project affected assets. Their continuous involvement in advance work related to land and property valuation and verification exercise is vital.
- ✔ Ministry of Public Works (MPW). The MPW is responsible for land-use zoning and will be engaged in site selection of subprojects. The Ministry of Public Works carries out the following broad functions: (i) Provision of advice, technical services, planning, design, and construction of works projects for other Government Departments and Agencies; (ii) Management of works and maintenance programs associated with public buildings, roads, bridges, airfields, jetties, water supplies, sewerage, and rural electricity; and (iii) Maintenance and operation of facilities owned by the Government.
- ✔ Ministry of Agriculture (MOA). MOA's mission is to create an enabling environment for a more dynamic and vibrant agricultural sector to ensure sustainable food security and employment opportunities for all Liberians. In this role, MOA will support verification and validation of the replacement costs of economic crops that will be affected by the civil works activities of subcomponent 2.2 of the project.
- ✔ Local Government Authorities (LGA). The LGA oversees the operation of the local government system and implements policy in relation to local government structures, functions, human resources, and financing. The LGAs are responsible for the local government administration, the maintenance of peace and healthy social relations, and cultural heritage in the hinterland. As such, LGAs will be included on the Grievance Redress Committees at the district and county levels to help in the resolution of PAPs grievances, claims, and complaints. The support of LGAs has proved critical in previous projects, and it is expected that their meaningful involvement will enhance the implementation of the project.

While working closely with the Environmental Protection Agency (EPA), Ministry of Public Works (MPW), Liberia Land Authority (LLA), National Fisheries and Aquaculture Authority (NaFAA) and

other relevant agencies at both national and county levels, the Liberia Ministry of Posts and Telecommunications (MoPT) will serve as the lead implementing agency. At this point in time, it is not clear if the Liberia project will constitute a Project Management Unit (PMU) or Project Steering Committee (PSC)[3] comprising senior level personnel from the key implementing agencies mentioned above to help coordinate the implementation of the project. MoPT will be supported in the day-to-day implementation of the project by a Project Implementation Unit (PIU) whose responsibility will be to (a) manage implementation (including monitoring and reporting) of the Project, including this ESMF, SEP, ESIAs/ESMPs and other associated plans; (b) develop procurement plans, tender documents and contracts for design and construction contractors and for consulting engineers to include (specifically or by reference) i) the ESIAs/ESMPs and other associated plans, ii) clauses that explicitly require contractors to comply with ESIAs/ESMPs and associated plans, and requirements and applicable standards; and iii) explicit statement that consulting engineers will be responsible for supervision of E&S performance; and (c) obtain all environmental permits and approvals. This PIU will be staffed with experienced and competent staff/specialists, among which are:

- Project Coordinator
- Environmental Specialist (with expertise in environment, biodiversity, OHS, requirements related to ESS1,3,6,8,10)
- Social Development Specialist (with expertise in gender, social, land acquisition/resettlement/livelihood restoration, community health and safety, requirements related to ESS1,2,4,5,8,10)
- M&E Specialist
- Procurement Specialist
- Financial Management Specialist

Concerning enforcing E&S requirements at the project areas, the PIU will work in close collaboration with the county officers of the EPA and designated county-level focal persons to support local screening and monitoring of subprojects implementation including E&S enforcement. Monitoring E&S (Environmental and Social) will entail assessing the project's performance against all its environmental and social action plan (ESAPs), national laws, and other applicable standards to ensure environmental and social risks are being managed effectively. It will include monitoring key E&S performance indicators (e.g., biodiversity loss, sedimentation and turbidity, accidents and occupational health and safety incidents, number and severity of external grievances, increase in harmful emissions or other pollution, labour unrest and other issues), providing early warnings of potential issues, and making necessary adjustments to the project's E&S measures (adaptive management) to prevent or mitigate negative impacts. Besides, monitoring will involve regular reporting on E&S performance and, given the level of significance of the E&S risks, should include independent third-party monitoring to provide a detailed, unbiased and objective review of E&S data.

Successful implementation of this ESMF will depend largely on the involvement and participation of local communities and effective and efficient delivery on the part of implementing entities

[3] The following institutions have already been notified by MoPT to serve on the **Steering Committee** for the entire duration of the project, unless otherwise communicated: MoPT; MFDP; CBL; IIC; LTA; CCL; New Cable Consortium; LRREN; EPA; MoGSP; MICAT; NIR; MoCI; MoE; Liberia ICT Student Union and Liberia Chamber of Commerce. The MoPT will consider expanding or streamlining the SC into smaller working groups, depending on stakeholder interests, and multisectoral project impact.

(IAs). WB will continue to provide continuous support to the PIU by strengthening the Borrower's capacity through tailored training, technical assistance, and knowledge exchange. In addition, the Project is advised to provide environmental and social awareness and education to key stakeholders and affected communities.

Information Disclosure and Stakeholder Engagement

The project will implement the Stakeholder Engagement Plan, review and revise as needed to ensure effective communication with stakeholders and Grievance Mechanism throughout the project lifetime.

Capacity Building

Recognizing that people are the most important stakeholders, enhancing public participation and raising stakeholders' awareness are practical measures which will support effective management of environmental and social risks and implementation (and enforcement monitoring) of mitigations actions under the project. Capacity improvements (organizational, human, technical and financial capacity) will include, as an important first step, the EPA and MoPT granting access to the ESMF and other reports to the public, training of all relevant actors involved in the implementation and monitoring of the project, including E&S risks (e.g., MoPT and PIU staff, MPW, EPA, E&S consulting firms and practitioners), developing good practice guidance notes for use under the project, and allocating adequate resources (e.g., for measurement equipment, cars to site visits and e.g. office resources) under the project to facilitate compliance enforcement and monitoring.

Budget

This ESMF also details the roles and responsibilities for its implementation and includes a detailed budget and monitoring and evaluation plan. The estimated cost (minus the salaries for the dedicated E&S Specialists) for implementing this ESMF is **USD500,000** (Five Hundred Thousand United States Dollars).

ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence
CAE	Child Abuse and Exploitation
C-ESMP	Contractor Environmental and Social Management Plan
CERC	Contingent Emergency Response Component
CNDRA	Centre for National Documents Records Agency
EHS	Environmental, Health, and Safety
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
E&S	Environment and Social
EMI/F	Electromagnetic Interference/Force
ESA	Environmental and Social Assessment
ESIA	Environmental & Social Impact Assessment
EPA	Environmental Protection Agency
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESRS	Environmental and Social Risk Summary
ESSs	Environmental and Social Standards
FDA	Forestry Development Authority
GAP	Gender Action Plan
GBV	Gender-Based Violence
GIIP	Good International Industry Practice
GM	Grievance Mechanism
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
GoL	Government of Liberia
HCI	Human Capital Indexes
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICT	Information and Communication Technology
ILO	International Labour Organisation
ITCZ	Interaction Of the Inter- Tropical Convergence Zone
LEC	Liberia Electricity Corporation
LGA	Local Government Authorities
LLA	Liberia Land Authority
MAM	Mission Aide Memoires
MDAs	Ministries, Departments, and Agencies
MFDP	Ministry of Finance and Development Planning
MLME	Ministry of Lands, Mines and Energy
MoPT	Ministry of Post and Telecommunication
MOCI	Ministry of Commerce and Industry
NaFAA	National Fisheries and Aquaculture Authority
NRENs	National Research and Education Networks
ODS	Ozone-depleting Substances
OHS	Occupational Health and Safety
PCB	Polychlorinated Biphenyls
PAD	Project Appraisal Document
PCN	Project Concept Note
PDO	Project Development Objectives
PFMU	Project Financial Management Unit
PID	Project Information Document

PIU	Project Implementation Unit
PPE	Personal Protective Equipment
SEA/SH	Sexual Exploitation and Abuse and Sexual Harassment
SET	Structure, Empower and Transform
SEA	Strategic Environmental Assessment
SMP	Security Management Plan
TMP	Traffic Management Plan
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank
WARDIP	West Africa Regional Digitalization Integration Program
WASH	Water, Sanitation and Hygiene

GLOSSARY

Project-Affected Person (PAP): An individual or group whose property, assets, livelihood, or access to resources are negatively impacted by project activities, including land acquisition, construction, or resettlement.

Alternative Dispute Resolution (ADR): A process for resolving conflicts through mediation, negotiation, or arbitration instead of formal legal proceedings to settle disputes related to compensation and resettlement.
Asset: Any property owned by a person, group, institution, or agency.

Associated Facilities: These are facilities or activities that are not funded as part of the project and, in the judgement of the World Bank, are (a) directly and significantly related to the project and (b) carried out or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist. The World Bank policy on involuntary resettlement may apply to resettlement induced by such facilities.

Census: A field survey was carried out to identify and determine the number of persons affected by the project activities or displaced due to land acquisition and related impacts. The census provides basic information needed to determine the appropriate resettlement option, including compensation, from consultations with affected communities and local government institutions.

Cost of Disturbance: The reasonable expenses incidental to any necessary change of residence or place of business by any person having a right or interest in the land. This can either be determined and paid separately or factored into the valuation rate to be applied.

Compensation: Payment in cash or kind for land, property, crops, or other assets acquired or affected by the project, calculated at full replacement cost.

Cut-Off Date: The specific date for eligibility for compensation and resettlement assistance is established. Any person or asset not identified before this date will not be eligible for compensation.

Displaced Persons: People or entities directly affected by a project through the loss of land and the resulting loss of residences, other structures, businesses, or other assets.

Economic Displacement: Loss of income streams or means of livelihood resulting from compulsory land acquisition or obstructed access to resources (land, water, or forest) which results from the construction or operation of a project or its associated facilities.

Eligibility: The criteria for qualification to receive benefits under a resettlement programme.

Entitlements: The benefits set out in the resettlement instrument (RPF, RAP), including financial compensation; the right to participate in livelihood restoration programmes; housing, house sites

and service provision; and transport and other short-term assistance required to resettle or relocate.

Full Replacement Cost: The method of valuation of assets that helps determine the amount sufficient to replace lost assets and cover transaction costs associated with asset replacement. In applying this method of valuation, depreciation of structures and assets is not to be considered.

Grievance Mechanism (GM)/Grievance Redress Mechanism (GRM): A formal system established to receive, assess, and resolve complaints or grievances from affected persons, communities or other stakeholders during the project's implementation.

Institutional Capacity Building: Strengthening the skills, resources, and structures of organizations involved in the resettlement and urban mobility process to ensure effective implementation.

Involuntary Resettlement: Resettlement is involuntary when it occurs without the informed consent of the displaced persons or if they give their consent without having the power to refuse resettlement.

Land Acquisition: Methods of obtaining land for project purposes, which may include outright purchase, expropriation of property and acquisition of access rights, such as easements or rights of way. Land acquisition may also include: (a) acquisition of unoccupied or unutilized land whether or not the landholder relies upon such land for income or livelihood purposes; (b) repossession of public land that is used or occupied by individuals or households; and (c) project impacts that result in land being submerged or otherwise rendered unusable or inaccessible. "Land" includes anything growing on or permanently affixed to land, such as crops, buildings and other improvements, and appurtenant water bodies.

Livelihood: This refers to the full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

Livelihood Restoration: Measures taken to ensure that affected persons can restore or improve their income levels and quality of life following displacement or loss of assets.

Project-Affected Person (PAP): Any person who, as a result of the implementation of the project, loses the right to own, use, or otherwise benefit from a built structure, land (residential, agricultural, pasture or undeveloped/unused land), annual or perennial crops and trees, or any other fixed or moveable asset, either in full or in part, permanently or temporarily. Affected people might be displaced either physically ("Physically Displaced People") or economically ("Economically Displaced People"). It includes all affected persons with and without title to the land they occupy.

Physical Displacement: Loss of shelter and assets resulting from compulsory land acquisition or restrictions on land use associated with the project, requiring affected persons to move to other locations.

Project Implementation Unit (PIU): The dedicated team responsible for coordinating, managing, and monitoring all activities under the project, including resettlement, compensation, and grievance management.

Resettlement: The process of relocating individuals or communities displaced by the project, ensuring access to adequate housing, services, and livelihood opportunities.

Resettlement Assistance: Measures to ensure that displaced persons who require to be physically relocated are assisted in material or psychosocial means, whichever is applicable for ease of relocating and restoration of livelihoods.

Resettlement Plan (RP): A detailed plan outlining the steps and measures to be taken to address the impacts of displacement, including compensation, relocation, and livelihood restoration.

Resettlement Framework (RF): A document that sets out the guiding principles, organizational arrangements, and procedures for managing involuntary resettlement under the project.

Vulnerable Groups: Individuals or groups who may be disproportionately affected by the project and require additional support, such as women, children, older people, persons with disabilities, and low-income households.

World Bank Environmental and Social Standard 5 (ESS5): The World Bank's policy framework for managing risks related to land acquisition, restrictions on land use, and involuntary resettlement, which guides project's resettlement processes.

1.0 INTRODUCTION

1.1 Background

In today's fast-paced digital world, reliable and high-speed internet connectivity has become a fundamental necessity for both households and businesses. As our dependence on digital communication, streaming services, remote work, and smart home technologies continues to grow, the demand for faster and more dependable internet solutions has never been higher. Also, the growing significance of fiber optics is because economies all over the world have become increasingly digitized. Fiber optics is a technology that uses glass strands to transmit data as light pulses. The popularity of this technology is extremely important for contemporary data networks, telecommunications, and the internet because it enables the transfer of high-speed data across great distances with minimal loss of integrity. This massive network, currently estimated at 5 billion km, connects continents, countries, cities, and households, enabling high-speed data transmission. Beyond markets, this booming sector, for instance, enables high-speed data transmission in: (i) the medical industry: fiber optics are used to transmit high-resolution images in procedures such as endoscopies and laser surgery; (ii) the transportation industry: fiber optics enable the real-time monitoring of traffic flow, parking, and rail track conditions; and (iii) industrial environments and smart infrastructure: fiber optics ensure consistent data and control signal transfer across long distances, as they are immune to electromagnetic interference.

Statistical data from Markets and Markets shows that the global fiber optics market will show constant growth. The expectation is that growth in this sector will reach US$6.8 billion by 2029 from US$3.2 billion in 2024, representing a compound annual growth rate of 16.4% (see Figure 1.1). The major drivers of growth in fiber optics are: (i) High and growing demand for high-speed internet and broadband services; (ii) The fast rollout of 5G infrastructure; (iii) A surge in data flow worldwide, fueled by cloud computing, streaming services, and the Internet of Things (IoT); and (iv) Digital transformation projects supported by governments, particularly in emerging nations in Southeast Asia and Africa.

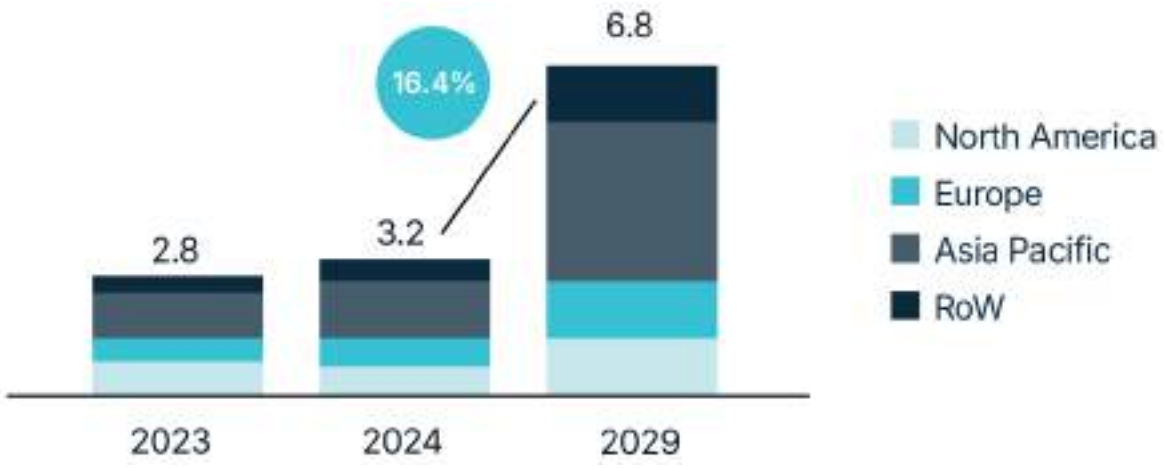


Figure 1. 1: Growth Projections in the Fiber Optics Market (Markets and Markets)

Africa, with a fiber penetration rate of less than 10%, is currently behind Asia, North America and Europe, and is in a catch-up mode. Governments across the continent are increasing their efforts

to link remote areas and improve access to e-governance, healthcare, and education. The overall number of people in Africa who benefit from an internet connection had increased to 646 million as of February 2025 from around 181 million in 2014. By 2029, this figure is expected to reach 1.1 billion, according to Statista. The Figure below shows a few countries in Africa by internet penetration.

Figure 1. 2: African countries by Internet Penetration (Statista)

Digitalization has become central to economic transformation in West Africa, with strong evidence of its impact on jobs, productivity, and inclusion. Studies show that digital access increases the probability of employment by up to 13.2 percent, employment per firm by 22 percent, and exports by nearly fourfold. Mobile broadband rollout has been linked to a 10 percent reduction in extreme poverty in Senegal and a 4.3 percent reduction in Nigeria. Beyond firm- and household-level gains, digital technologies enable governments to improve service delivery, increase transparency, and enhance resilience. Liberia primarily relies on the Africa Coast to Europe (ACE) submarine fiber optic cable for international connectivity, with a growing metropolitan fiber ring in Monrovia and recent efforts to expand a domestic fiber backbone to more towns outside the capital. While progress has been made, significant investment is still needed to build out a nationwide fiber network and overcome challenges like the high cost of internet services and limited access in rural areas. In 2011, Africa Coast to Europe (ACE) installed and commissioned its first submarine cable in Liberia, which marked a transformative moment in the country's connectivity landscape. The ACE cable, which landed at the Monrovia Cable Landing Station in Central Monrovia, facilitated a dramatic reduction in international bandwidth costs, enabling improved mobile and internet services. However, Liberia remains one of the least connected countries in the sub-region in terms of digital infrastructure resilience and reach. Access gaps persist, especially in rural and coastal regions, and internet affordability remains a barrier to large portions of the population.

Recognizing these challenges, the Government of Liberia, through the Ministry of Posts and Telecommunications (MoPT), and with support from the World Bank, through the West Africa Regional Digital Integration Project (WARDIP) SOP2, intends to install a second submarine cable. This project could represent the implantation of the "Amilcar Cabral" project supported by the Economic Community of West African States (ECOWAS), designed to interconnect five countries (Gambia, Guinea Bissau, Guinea, Sierra Leone and Liberia) in the region that only have a single connection to a submarine cable in Cape Verde, thereby increasing the redundancy and capacity of the digital infrastructure in West Africa. This cable will act as a redundancy to the ACE system, enhance Liberia's international internet capacity, and strengthen its overall digital resilience. The second cable is also expected to serve as a regional node within the West Africa Digital Corridor,

supporting economic integration within ECOWAS, facilitating data flow between countries, and ensuring Liberia remains competitive in the regional and global digital economy.

Liberia is one of the smallest economies in the West African region, with a population size of around 5.5 million and a GNI per capita of US$730 in 2023. Its population is young, with more than half being under 25 years of age. The country continues to grapple with challenges that threaten development, resulting in most of the population not experiencing the dividends of peace through better jobs and improved quality of life. About a third of the young people in the labor force are currently unemployed, and two-thirds live in abject poverty. The country has one of the lowest Human Capital Indexes (HCI) in the world, at 0.36, and ranked among the bottom ten in 2020. The two ruinous civil wars between 1989 to 1997 and 1999 to 2003 had a profound impact on its development and population, as most of the country's infrastructure was destroyed.

Also, Liberia is highly vulnerable to the impact of natural hazards and climate change. The country ranks 177 out of 185 countries in the Notre Dame Gain Index, indicating high exposure and sensitivity, and low ability to adapt to the negative impacts of climate change. Importantly, women and girls suffered the worst consequences from the 14 years of two brutal civil wars, and the subsequent emerging economic crises related to other factors. Critical key challenges that further threaten the countries development are: Inadequate developed and integrated connectivity market, inadequate developed and integrated data market, inadequate and integrated online market. Howbeit, Liberia continues to rebuild with efforts focused on improving governance, economic stability, and social services for its population.

Under the West Africa Regional Digitalization Integration Program (WARDIP-SOP 2), the Government of the Republic of Liberia has acquired a financial facility worth $50 million from the World Bank (WB). The proposed project aims to increase access to broadband and digital services by developing and integrating digital markets in the Western Africa region. The project will support Liberia, ensuring an enabling environment for digital skills, innovation, and competitiveness in the regional single Digital Market. It will also ensure the achievement of national digital development objectives more effectively and rapidly while taking cognizant of regional digital transformation objectives. The development of the national policies, regulations and the implementation of strategic programs, that would further enhance cross-border connectivity, data flows and digital services, allowing a seamless and competitive national and regional digital ecosystem to emerge. This would drive a reinforcing cycle of economic growth, investment, innovation, job creation and improved service delivery at national and regional levels. The project will be implemented by the Ministry of Post and Telecommunications in selected local government administrative areas of Liberia.

At this stage of project design and preparation, the Environmental and Social Risk associated with the Project is assessed as Substantial. This rating is reflective of the nature and scope (scale and technical complexity and location) of project activities, particularly those proposed under Component 2 which involve the construction and installation of submarine fiber-optic telecommunication cables and ancillary facilities onshore in Liberia.

1.2 Purpose of the ESMF

Given the complexity and substantial-risk nature of the project, coupled with the inability to ascertain specific locations and their associated risks and impacts at this stage, a framework approach has been chosen. This Environmental and Social Management Framework (ESMF) has

therefore been prepared to guide the assessment and management of environmental and social risks as project details are finalised. By adopting a flexible and adaptive approach, the ESMF ensures that environmental and social considerations are fully integrated into project planning, design, and implementation, thus minimising negative impacts while enhancing the project's sustainability and benefits for local communities.

1.3 Objectives of the ESMF

The objective of the ESMF is to ensure that the implementation of the project is carried out in an environmentally and socially responsible manner. For this reason, the ESMF aims to provide a framework for identifying, assessing, managing, and mitigating potential environmental and social risks and impacts associated with the project. The ESMF ensures that the project is implemented per the World Bank's Environmental and Social Standards (ESSs) and relevant national laws and regulations in Liberia while promoting sustainable development and enhancing the project's positive social and environmental outcomes.

The specific objectives of the ESMF are:

i. Identify the regulatory and institutional framework relevant for the Project;
ii. Assess the physical, biological and socioeconomic baseline conditions of the wider project area;
iii. Identify and assess the potential environmental and social risks and impacts that would be associated with the project;
iv. Establish clear procedures for assessing and managing environmental and social risks and impacts that would be associated with subproject interventions;
v. Propose mitigation measures for identified risk and impact to minimise adverse effects on the environment and local communities;
vi. Outline the appropriate roles and responsibilities, training needs and budget required for managing E&S risks;
vii. Establish a Grievance Mechanism for the project to ensure effective communication and resolution of stakeholder concerns.
viii. Address mechanisms for public consultation and disclosure of project documents as well as redress of possible grievances; and
ix. Establish the budget requirements for implementation of the ESMF.

In line with the World Bank's streamlining approach and consistent with the requirements of ESS5 (Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement), this ESMF includes a Resettlement Framework (RF). The RF sets out the guiding policies, principles, institutional arrangements, schedules, and indicative budget to address potential land acquisition and resettlement impacts. It ensures a systematic process across all stages of implementation, promoting the participation of affected persons, the involvement of relevant institutions and stakeholders, and adherence to both World Bank and Government of Liberia procedures and requirements. The specific objectives of the RF are:

i. To establish principles and objectives to guide resettlement planning and implementation, ensuring alignment between resettlement activities and civil works.
ii. To outline the process and criteria for evaluating the impacts of project footprint (including rights-of-way) and defining compensation packages.
iii. To specify the process for preparing and approving Resettlement Plans (RPs) as necessary.
iv. To define the eligibility criteria for different categories of impacted/displaced persons.

v. To describe the methods for valuing affected assets and compensating for losses.

1.4 Methodology for the ESMF Preparation

The preparation of the ESMF followed a systematic approach aimed at identifying and assessing potential environmental and social risks and impacts of the project. Specifically, the following procedures were followed during the preparation of the ESMF (for detail information on methodology, refer to the SEP prepared for this project):

a) Desk-Based Studies:

- A review of key project documents such as the Project Concept Note (PCN), Project Information Document (PID), Project Appraisal Document (PAD), Concept & Appraisal stage Environmental and Social Risk Summary (ESRS), Mission Aide Memoires (MAM), Preliminary Environmental and Social Study (PESS)[4] conducted by TACTIS in 2025, and stakeholder consultation briefs.
- Relevant research, technical reports, and national strategy and action plans on Digitalization and Information and Communication Technology (ICT).
- Additionally, a review of the World Bank Environmental and Social Framework (ESF), IFC Performance Standards, WBG General and Industry-Sector Environmental, Health and Safety Guidelines, alongside Liberia's national policies, legislations, and environmental and social management guidelines, was undertaken to ensure compliance with local and international standards.

b) Stakeholder Identification and Analysis:

- All key stakeholders, including primary and secondary stakeholders, were identified. A detailed stakeholder analysis was performed to ensure inclusive engagement and capture all affected parties' interests and concerns.

c) Analysis of Policies and Regulatory Framework:

- An analysis of the policies and regulatory framework relevant to environmental and social management was conducted, ensuring the project aligned with national and World Bank standards.

d) Field Surveys and Baseline Data Collection:

- Field surveys were undertaken at the project area to gather baseline environmental and social data. This clearly understood the existing conditions and helped identify potential project impacts.

e) Screening and Analysis of Potential Environmental and Social Risks and Impacts:

- A systematic screening process was used to identify the potential environmental and social risks associated with the project activities. This analysis formed the basis for outlining potential impacts and risks that may arise during the project's implementation.

f) Identification of Potential Risk Mitigation Measures:

- Potential environmental and social risks were analysed, and appropriate mitigation measures were identified. These measures were designed to minimise negative impacts while enhancing the project's positive outcomes.

[4] Most basic baseline data on project location was taken from the PESS for the preparation of this ESMF.

2.0 PROJECT DESCRIPTION

2.1 Program Development Objective and Components

The project development objectives (PDO) will be realized through the following resullt level channels and indicators:

(a) Increase broadband access and usage
- People using broadband internet (new use with key consideration to women)
- Used international bandwidth per mobile internet user (Kbit/s per person)

(b) Promote the establishment of a single digital market in Western Africa
- Cross-border digital transactions (number)
- Public digital services developed/reengineered for regional integration (number)

The proposed project components to be implemented in the Republic of Liberia are:

Component 1: Building Policy and Financing Pathways for West African SDM

This component supports WAEMU's vision of a Single Digital Market (SDM) by 2030, focusing on policy development, capacity building, and private capital mobilization. It includes:

- Subcomponent 1.1: Establishes WAEMU's Digital Economy Program Implementation Unit and supports legal reforms for digital public services.
- Subcomponent 1.2: Delivers training on digital policy, cybersecurity, AI, and gender inclusion in digital markets.
- Subcomponent 1.3: Launches a regional guarantee facility managed by FAGACE to issue Digital Bonds, attracting $500M in private financing for digital infrastructure and services.

Component 2: Connectivity Market Development and Integration

This component enhances regional broadband connectivity and infrastructure resilience through public-private partnerships. It includes:

- Subcomponent 2.1: Strengthens legal and regulatory frameworks, including spectrum policy and internet governance.
- Subcomponent 2.2: Supports submarine cable systems and landing stations, with climate-resilient and energy-efficient designs. Also strengthens National Research and Education Networks (NRENs) and explores alternative connectivity routes using existing infrastructure. The key activities under this subcomponent will include: 1) pre-surveying of the submarine cable route within the marine and terrestrial environments using survey ships that map the seafloor using sonar, underwater drones, and other sensors to gather data about the topography, seabed composition, and potential obstacles; 2) cable laying involving trenching and anchoring within the marine environment up to the cable landing point (CLP) offshore using specialized equipment[5]; 3) cable laying from CLP offshore to the beach manhole terminal (BMT) involving trenching plus construction of BMT itself; 4) construction of the cable landing station (CLS) within the Liberia Telecommunications Corporation (LTC) compound in Buchanan; 5) establishing a network of underground

[5] This equipment could be cable laying vessels (CLVs) equipped with dynamic positioning (DP) systems, cable carousels, and tension control systems. For cable protection, equipment includes subsea trenchers (jet and plough trenchers), and Remotely Operated Vehicles (ROVs). Additionally, a variety of tools for pre-laying, like grapnels to clear the route, and for the final installation process, such as sheaves, tensioners, and capstans.

ducts and conduits (involving trenching and excavation) for laying cable from BMT to the CLS.

Component 3: Data Market Development and Integration
This component promotes secure cross-border data flows and AI adoption. It includes:

- Subcomponent 3.1: Builds cybersecurity and data protection capacity, including CSIRTs, CIIP, and awareness campaigns.
- Subcomponent 3.2: Develops sovereign multi-cloud infrastructure, electronic trust services, with a focus on sustainability and inclusion.

Component 4: Online Market Development and Integration
This component boosts digital entrepreneurship, financial inclusion, and e-commerce. It includes:

- Subcomponent 4.1: Provides digital skills training and early-stage financing for startups, with a focus on women and underserved groups.
- Subcomponent 4.2: Expands digital payment infrastructure and agent networks and strengthens institutional capacity.
- Subcomponent 4.3: Supports legal reforms for digital trade and e-commerce, including digital address systems and sector-specific platforms like e-agriculture.

Component 5: Project Management and Implementation Support
This component strengthens PIU capacity for project execution, monitoring, and compliance. It includes support for audits, citizen engagement, grievance redress mechanisms, and environmental and social safeguards.

Component 6: Contingent Emergency Response Component (CERC)
This component allows rapid reallocation of project funds in response to emergencies. Activation requires a CERC Manual, Emergency Action Plan, and compliance with environmental and social safeguards.

2.2 Project Beneficiaries

The project will benefit individuals, businesses, public sector entities (MDAs) in Liberia, and more broadly across the West African region through WAEMU and FAGACE, by improving access to connectivity and fostering an enabling environment for digital entrepreneurship, e-services (including access to finance) and skills development.

(a) **Individuals** will gain access to an expanding regional digital market, creating new job opportunities and access to public and commercial online services. By the project's end, at least 5 million people are expected to have new or enhanced broadband access, while 26,000 citizens (not included in (c) below) — at least 50% women — will benefit from digital skills training, increasing their readiness to access online services and contribute to the digital economy.

(b) **Businesses** will benefit from the development of a regional digital market to scale their operations and expand their market reach at both national and regional levels (e.g. business process outsourcing, cross-border trade, digital exports, etc.). Broader reforms and investments for resilient broadband and data infrastructures that promote private sector activity and investment will create a more secure, cost-effective and inclusive environment

for conducting online business, leveraging digital technology for access to market and finance, and creating job opportunities. Finally, businesses, including digital service providers and fintech's, will benefit from competitively awarded contracts.

(c) **Public sector ministries, departments, and agencies (MDAs), including ICT ministries and regulatory bodies**, will receive targeted financial and technical assistance. Approximately 30,000 mid-to-high-level policymakers and decision-makers (in addition to the citizens mentioned in (b) above), 40% of whom will be women, will benefit from capacity building activities with a goal to improve governance and the public sector's capacity in private sector development. Public institutions, including universities and TVETs, will also gain improved connectivity through National Research and Education Networks (NRENs).

3.0 POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

This section reviews the national policies, regulations, procedures and legal provisions relating to the environment and social issues in development interventions. The reviews have been made against the World Bank Environmental and Social Framework (ESF) requirements as well as the Republic of Liberia's relevant environmental and social laws/policies as summarized below:

3.1 Relevant Policies

Table 3.1 below describes the relevant national policies that set the context within which the project will operate.

Table 3. 1: Key National Policies of Liberia and Their Relevance to the Project

Liberia Information and Communications Technology (ICT) Policy (2019–2024)	This policy updates the National Telecommunications ICT Policy of 2010. It seeks to leverage ICT to drive Liberia's social and economic development under the three pillars of Structure, Empower, and Transform (SET).	Provides a strategic foundation for advancing Liberia's digital transformation agenda. The project directly supports this policy by expanding broadband connectivity, strengthening the ICT regulatory environment, and promoting regional digital integration consistent with national ICT priorities.
National Environment Policy of Liberia (2002)	The policy aims to ensure Liberia's long-term economic growth through sustainable social and economic development that preserves environmental quality and resource productivity. It seeks to improve living conditions, reconcile economic growth with sustainable resource use, and ensure public participation in environmental protection.	Ensures that project implementation complies with national environmental sustainability standards and safeguards. It reinforces the integration of environmental and social management measures in project design, consistent with the World Bank's Environmental and Social Framework (ESF).
Land Administration Policy (2015)	Provides the framework for land administration in Liberia, focusing on identification, ownership, use, and valuation of land. It establishes institutional mechanisms for land rights management, valuation, and coordinated land use planning at both central and local levels.	Relevant to project activities involving infrastructure deployment, such as laying broadband cables or constructing digital infrastructure. It guides the management of land acquisition, rights-of-way, and compensation processes in compliance with national laws and ESS5 (Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement).
National Environmental and Occupational Health Policy (2010)	Aims to assess and improve workplace conditions, establish occupational health databases, and implement wellness programs to promote and protect workers' health.	Guides the project's implementation of Occupational Health and Safety (OHS) measures to ensure safe working environments during civil works

	It sets standards and guidelines for occupational health and safety (OHS) in Liberia.	and infrastructure installation, consistent with ESS2 (Labor and Working Conditions).
National Youth Policy and Action Plan (2019–2023)	Promotes youth participation in national decision-making and provides a framework for their social, economic, and political empowerment. It aims to improve youth access to education, employment, and entrepreneurship opportunities.	Supports youth inclusion in project design and implementation through capacity-building initiatives, digital skills training, and job creation opportunities in the ICT and digital economy sectors.
National Gender Policy (2009)	Seeks to eliminate gender disparities by promoting equitable socioeconomic development and empowering women and girls. It emphasizes gender mainstreaming in national development and equal access to opportunities and resources.	Ensures the integration of gender equality and social inclusion principles in project implementation. The project aligns with this policy by promoting women's participation in digital skills programs, entrepreneurship, and access to online services.
National Energy Policy	Aims to achieve universal access to modern, affordable, sustainable, and environmentally friendly energy services. It focuses on good governance, private sector participation, and a strong institutional and regulatory framework to support energy access and economic growth.	Provides direction for ensuring that digital infrastructure investments—particularly broadband networks and data centers—are energy-efficient and sustainably powered, consistent with ESS3. It supports the project's efforts to promote reliable and resilient energy supply for digital connectivity.

3.2 Relevant National Legal and Regulatory Framework

Table 3.2 below describes the relevant legislation of the Government of Liberia relating to the project.

Table 3. 2: Key National Laws and Regulations Relevant to the Liberia Digital Transformation and Connectivity Project

Constitution of Liberia (1986)	The Constitution mandates that the Republic manage its national economy and natural resources to ensure the maximum feasible participation of Liberian citizens, under conditions of equality, to advance general welfare and national economic development.	Provides the overarching legal foundation for inclusive and equitable development. The project aligns with constitutional principles by promoting equitable digital access, citizen participation, and socio-economic transformation through digital inclusion.

Environmental Protection Agency (EPA) Act (2003)	Establishes the EPA as the principal authority for environmental management, responsible for coordinating, monitoring, and supervising activities that affect the environment and natural resource use. The Act includes provisions for Environmental Impact Assessments (EIAs), public participation, and appeal procedures.	Ensures that project activities comply with national environmental management standards and EIA procedures. The EPA will oversee the project's ESIA process to mitigate potential environmental and social risks associated with infrastructure works.
Environmental Protection and Management Law (2003)	Provides the legal framework for sustainable environmental management and resource protection through collaboration among government institutions, organizations, and the public. It covers a wide range of environmental issues, including EIA requirements for development projects.	Mandates environmental sustainability in all development initiatives. The project must comply with this law in implementing digital infrastructure to minimize adverse environmental impacts and ensure resource efficiency.
Environmental & Social Impact Assessment / Strategic Environmental Assessment (ESIA/SEA) Procedural Guidelines (2021)	Updated from the 2017 EIA Guidelines, these provide detailed procedures for ESIA and SEA in Liberia, emphasizing Policy, Partnership, and Participatory approaches to strengthen environmental governance. They outline the ESIA process—registration, scoping, EIS preparation, and public hearing.	Provides the procedural basis for assessing and managing environmental and social risks of the project. The project will adhere to these guidelines to ensure that infrastructure development and digital connectivity initiatives are environmentally and socially sustainable.
Liberia Land Authority Act (2016)	Establishes the Liberia Land Authority (LLA) as the institutional body responsible for land administration, including ownership, valuation, use, and coordination of land management across central and local levels.	Relevant to project activities that involve land use and rights-of-way for broadband and infrastructure deployment. The LLA's coordination role ensures fair, transparent, and lawful land management during project implementation.
Liberia Land Rights Act (2018)	Defines land ownership categories (Private, Customary, Government, and Public Land) and outlines mechanisms for proof, protection, and registration of land rights. Recognizes customary and women's land rights and establishes procedures for dispute resolution and community participation.	Ensures that any land acquisition or use for project infrastructure adheres to principles of fairness, equity, and community participation. Supports compliance with ESS5 on land acquisition and involuntary resettlement.
Decent Work Act (2015)	Protects workers' fundamental rights and establishes standards for	It guides the project's labor and working conditions in line with

	employment, workplace conditions, social protection, and labor relations. It ensures compliance with international labor obligations and promotes decent, safe, and equitable employment.	ESS2. Ensures fair treatment, occupational health and safety, and non-discriminatory employment for all workers engaged in project implementation.
General Business Law (1978)	Regulates business operations, including licensing, registration, consumer protection, monopolies, and trade practices. It establishes standards for fair business conduct and investment promotion in Liberia.	Supports the project's goal of stimulating private sector participation in the digital economy by providing a transparent regulatory environment for digital enterprises, ICT service providers, and e-commerce activities.
National Water, Sanitation & Hygiene (WASH) Commission Act (2012)	Establishes the WASH Commission as the lead entity for promoting and regulating water, sanitation, and hygiene services. It sets standards, builds local capacity, and ensures proper waste management for health and sustainable development.	Relevant for managing environmental health and sanitation aspects of project activities, especially where infrastructure works may affect local communities or water resources. Supports alignment with ESS4 on community health and safety.
Executive Order No. 92 on Domestic Violence (2018)	Defines domestic violence offenses, penalties, and protective measures, including the duties of law enforcement officers. It provides mechanisms for victim protection, rehabilitation, and enforcement.	Supports the project's Gender-Based Violence (GBV) and Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) risk mitigation measures by reinforcing national legal protection frameworks and response mechanisms.
Forestry Development Authority (FDA) Act (1976, as amended)	Establishes the FDA and empowers it to manage forest resources sustainably through the creation of forest reserves, national parks, and conservation programs. It promotes scientific forestry, training, and forest-based research.	Ensures that project infrastructure activities avoid adverse impacts on forest ecosystems. The project will comply with FDA requirements and ESS6 to protect biodiversity and natural habitats during implementation.
National Fisheries and Aquaculture Authority (NaFAA) Act (2017)	Establishes NaFAA as an autonomous body to manage and develop Liberia's fisheries and aquaculture sector. It promotes sustainable fisheries, marine conservation, and community participation in resource management.	Relevant for any project activities near coastal or aquatic areas, ensuring sustainable resource management and coordination with NaFAA to avoid negative impacts on marine ecosystems or fisheries livelihoods.

3.3 Institutional Framework

Table 3.3 below describes the relevant institutions of the Government of Liberia relating to the project.

Table 3. 3: Key Institutions, Descriptions, and Their Potential Roles and Responsibilities in Project Implementation

Ministry of Finance and Development Planning (MFDP)	Principal authority on fiscal and development planning, coordinating multilateral funding support and implementing national development programs. Houses the Project Financial Management Unit (PFMU) responsible for fiduciary management of World Bank–supported projects.	• Sign off on the Financial Agreement and lead project negotiations with the World Bank. • Oversee financial management through the PFMU. • Support preparation of consolidated work plans and budgets (including E&S activities). • Monitor and report on implementation progress against work plans and budgets.
Ministry of Posts and Telecommunications / Digital Economy	Lead implementing agency overseeing ICT strategy, postal services, internet policy, and digital economy initiatives. Coordinates with partners such as USAID's Digital Liberia for public sector ICT development.	• Lead overall project coordination and implementation. • Oversee digital infrastructure, connectivity, and e-governance components. • Facilitate stakeholder collaboration and institutional strengthening for the digital economy.
Liberia Telecommunications Authority (LTA)	National telecom regulator established under the 2007 Act. Oversee digital transformation initiatives, stakeholder engagement, and development of digital regulatory frameworks.	• Regulate and monitor telecommunications and broadband activities. • Support policy, data governance, and consumer protection frameworks. • Lead stakeholder engagement on connectivity and digital inclusion.
Cable Consortium of Liberia (CCL)	Public-private partnership established to own and operate Liberia's landing point for the Africa Coast to Europe (ACE) submarine cable	• Operate and maintain the ACE submarine cable landing station and international gateway. • Manage wholesale capacity sales and distribution to licensed operators. • Ensure system reliability, redundancy, and maintenance coordination with the ACE consortium. • Support national and regional broadband expansion by providing affordable international bandwidth.
Liberia Telecommunications Corporation (Libtelco)	State-owned telecom provider managing the national fiber backbone and expanding into mobile broadband.	• Provide technical infrastructure for broadband connectivity. • Support network deployment and maintenance.

		• Collaborate with the project on expanding national fiber and digital access.
Central Bank of Liberia	Monetary authority oversees financial stability, banking regulation, and modernization of payment systems. Leads the national digital financial services (DFS) and financial inclusion agenda in collaboration with commercial banks, mobile money providers, and development partners.	• Oversee policies and regulations supporting digital financial inclusion and electronic payment systems. • Facilitate interoperability across financial service providers and mobile money platforms. • Strengthen the enabling environment for fintech innovation and consumer protection under the DFS component. • Collaborate with MFDP, MoPT, and development partners to expand access to digital financial services for underserved populations.
Ministry of Education (MoE)	National authority for education policy, curriculum development, and human capital development. Increasingly focused on integrating digital literacy and ICT into the education system to prepare learners for the digital economy.	• Lead national efforts on digital literacy and skills development across formal and non-formal education systems. • Integrate ICT and digital competencies into school curricula and teacher training programs. • Collaborate with MoPT and private partners to expand access to digital learning platforms and infrastructure.
Ministry of Youth and Sports (MoYS)	Principal institution responsible for youth empowerment, employment, and entrepreneurship programs. Acts as a key partner in advancing digital skills, innovation, and income-generating opportunities for young people.	• Facilitate partnerships with training centers, innovation hubs, and private-sector employers to align skills with market needs. • Integrate digital entrepreneurship and innovation into youth development and empowerment programs. • Coordinate with MoE and MoPT to ensure inclusive access to skills development and employment opportunities for youth nationwide.
e-Liberia / e-Government Platform	Central digital government platform integrating e-services across ministries. Implement systems like IFMIS and LRA e-services to improve efficiency and transparency.	• Coordinate digital public services integration. • Support interoperability and government systems modernization. • Enhance digital governance and service delivery mechanisms.
Liberia Institute of Statistics and Geo-Information Services (LISGIS)	National agency that provides data and geo-information for planning and decision-making.	• Supply demographic and spatial data for digital infrastructure planning. • Support mapping and analytics for infrastructure siting and monitoring.

		• Collaborate on digital data integration and geospatial systems.
Ministry of Commerce and Industry (MOCI)	Responsible for trade regulation, business standards, and quality control of goods and services. Promotes industrial and commercial development.	• Promote private sector participation in the digital economy. • Support regulatory frameworks for ICT and digital trade. • Facilitate business registration and standards enforcement for digital enterprises.
Ministry of Public Works (MPW)	Oversee public infrastructure, land-use zoning, and site selection for government projects. Provides technical and engineering services for national works.	• Support site selection and infrastructure design for project subcomponents. • Ensure alignment with national land-use plans and construction standards. • Supervise civil works and ensure compliance with environmental and safety standards.
Local Government Authorities (LGA)	Manage local governance, social relations, and community affairs at county and district levels.	• Participate in Grievance Redress Committees (GRCs). • Facilitate community engagement and grievance resolution. • Support local implementation and oversight of project activities.
Liberia Land Authority (LLA)	Autonomous agency responsible for land administration, valuation, and dispute resolution. Consolidates land functions from various government bodies.	• Support land acquisition, valuation, and compensation processes. • Provide technical input for resettlement planning. • Ensure fair and lawful management of land-related aspects of the project.
Liberia Electricity Corporation (LEC)	State-owned utility responsible for generation, transmission, and distribution of electric power nationwide.	• Provide power supply for digital infrastructure installations. • Collaborate on infrastructure sharing and network expansion. • Support energy access for ICT facilities and project sites.
Liberia National Disaster Management Agency (NDMA)	Coordinates disaster management and risk reduction activities across national and local levels.	• Provide disaster risk data and support risk assessments. • Collaborate on resilience and emergency response planning. • Support implementation of disaster mitigation measures in project sites.
Liberia Marketing Association (LMA)	Responsible for market management, fee collection, and sanitation within market areas.	• Facilitate consultations with market stakeholders. • Support ESMF implementation in market-related subprojects. • Promote waste management and community participation during infrastructure upgrades.

Ministry of Health (MOH)	Administers health services, including public health monitoring and environmental health regulation. Oversee occupational and chemical safety standards.	• Support health risk assessments and occupational health oversight. • Collaborate on health and safety training for workers. • Monitor potential public health impacts of project activities.
Liberia Energy Regulatory Commission (LERC)	National energy regulator overseeing generation, transmission, and distribution licensing and compliance.	• Regulate energy components of project infrastructure. • Issue relevant permits and ensure compliance with safety standards. • Coordinate with LEC and RREA on energy access and renewable integration.
Rural and Renewable Energy Agency (RREA)	• Promotes renewable energy and rural electrification through development of modern energy products and services.	• Support deployment of renewable and off-grid energy solutions for digital infrastructure. • Promote sustainable and energy-efficient project operations. • Facilitate rural connectivity through energy access initiatives.

3.4 E&S Approvals, permits and licenses required for subproject activities

For the laying and operation of a fiber-optic telecommunication cable system in Liberia, essential Environmental and Social (E&S) approvals and permits will likely include those from the relevant Liberian agencies that issue licenses or permits, but are not limited to:

- Ministry of Commerce and Industry (MoCI) issues an Import Permit Declaration (IPD) required for the importation of equipment.
- Liberia Telecommunications Authority (LTA) issues authorization/licenses to provide telecommunications services or operate telecommunications facilities or approval for the installation of equipment,
- Liberia Land Authority (LLA) plays a role in approving land acquisitions and resettlement processes.
- From the EPA for an Environmental (and Social) Impact Assessment (ESIA) permit to begin implementation of subprojects under WARDIP SOP2 Liberia,
- Construction Permit from road authorities (i.e., Ministry of Public Works (MPW) for right-of-way (ROW) access and clearance, especially for any work that requires excavation.
- Liberia Maritime Authority (LMA): permits and licenses required for marine-related activities such as laying of fiber-optic cables.
- Ministry of Justice (MOJ): permits and clearances for all security-related companies.
- National Fisheries & Aquaculture Authority (NAFAA): licenses and permits required for artisanal and industrial fishing activities.
- Other permits such as Liberian Entry Visa and Work Permit will be needed from the Liberian immigration authorities.

3.4 The Relevant International Conventions and Protocols

The Republic of Liberia is a signatory to several international, regional, and sub- regional conventions, treaties and agreements. The following are international, regional, and sub-regional laws and conventions, treaties and agreements in which Liberia is a signatory and are considered applicable to this proposed WARDIP-SOP2 (Table 3.4).

Table 3. 4: International Conventions, Descriptions, and Their Relevance to Liberia

United Nations Framework Convention on Climate Change (UNFCCC), 1992	The UNFCCC is an international treaty established to stabilize greenhouse gas concentrations in the atmosphere and prevent dangerous anthropogenic interference with the climate system. It promotes sustainable management and conservation of carbon sinks such as forests, oceans, and ecosystems. Liberia ratified the Convention in 2002 and submitted its Initial National Communication and first GHG inventory in 2020.	Provides the framework for Liberia's climate change policies and commitments to mitigation and adaptation, guiding national strategies on environmental sustainability and resilience.
United Nations Convention on Biological Diversity (CBD)	A legally binding treaty with three objectives: (a) conservation of biological diversity; (b) sustainable use of its components; and (c) fair and equitable sharing of benefits from genetic resources. Liberia ratified it on 8 November 2000.	Guides Liberia's biodiversity conservation and ecosystem management initiatives; underpins environmental protection aspects of the project.
United Nations Convention on the Law of the Sea (UNCLOS)	Provides the legal framework for all ocean-related activities, defining maritime zones, navigation rights, resource exploitation, and marine environment protection. Liberia ratified UNCLOS and the Biodiversity Beyond National Jurisdiction (BBNJ) Treaty in June 2025.	Supports sustainable marine resource management, marine biodiversity protection, and governance of Liberia's coastal and offshore activities.
International Labour Organization (ILO) Conventions	Fundamental conventions covering workers' rights, including freedom of association, elimination of forced and child labor, and non-discrimination. Liberia has ratified six out of eight fundamental conventions.	Reinforces fair labor practices and workers' protection within project implementation, aligning with ESS2 (Labor and Working Conditions).
International Covenant on Economic, Social and Cultural Rights (ICESCR), 1976	Commits States to uphold rights related to labor, health, education, and an adequate standard of living. Liberia ratified in 2004.	Promotes social inclusion, decent work, and equitable access to development benefits within project operations.
Stockholm Convention on Persistent Organic Pollutants (POPs)	Aims to eliminate or restrict the production and use of persistent organic pollutants. Liberia signed in 2002.	Supports pollution control, safe waste management, and chemical safety in project activities, consistent with

		ESS3 (Resource Efficiency and Pollution Prevention).
Vienna Convention for the Protection of the Ozone Layer	Commits Parties to cooperation in research and preventive measures against ozone layer depletion. Liberia signed in 1996.	Strengthens Liberia's commitment to atmospheric protection and aligns with global environmental safeguards.
Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)	Promotes gender equality and women's empowerment, ensuring women's rights in political, economic, and social spheres.	Ensures gender equality, inclusion, and women's participation in project design and implementation, supporting ESS10 (Stakeholder Engagement) and gender mainstreaming.
Abidjan Convention	Regional convention for cooperation in protecting and developing the marine and coastal environment of West and Central Africa. Liberia ratified it and signed the 2015 Abidjan Declaration.	Provides a regional framework for marine and coastal protection relevant to project areas and coastal resilience.
African Convention on the Conservation of Nature and Natural Resources	Promotes joint African action in conserving, utilizing, and developing natural resources for present and future generations. Liberia is a contracting party.	Supports sustainable resource management and biodiversity conservation principles aligned with ESS6 (Biodiversity Conservation).

3.5 The World Bank's Environmental and Social Standards (ESS)

The World Bank launched the Environmental and Social Framework in 2018 to be applied to all investment projects commencing on or after October 1st, 2018. The ESF re-enforces the vision of the Bank to pursue sustainable development and poverty reduction. It also sets out the policy of the Bank to support borrowers to develop and implement environmentally and socially sustainable projects and build capacity in the assessment and management of environmental and social impacts and risks associated with the implementation and operation of projects. As part of the new framework, the World Bank also has environmental and social standards that borrowers must comply with for projects to be sustainable, non-discriminatory, transparent, participatory, environmentally and socially accountable and conform to good international practices. There are ten (10) Environmental and Social Standards under the new World Bank Environmental and Social Framework that all projects/investments supported with Bank Financing must conform to. Eight (8) of these standards are relevant to WARDIP-SOP2-Liberia. See Table 3.5 below for details.

Table 3. 5: World Bank's ESSs Relevant for WARDIP-SOP2 Liberia

ESS 1. Assessment and Management of Environmental and Social Risks and Impacts	Relevant	ESS1 sets out the Client'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, to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).	- Apply the ESMF screening and decision logic to every subproject: use an exclusion list, assign risk classification, and trigger the correct instruments (ESIA/ESMP, BMP, RAP/ARAP, LMP, SEA/SH Action Plan, Security Plan, Chance Finds). - Prepare site-specific ESMPs/ESIAs proportional to risk, aligned with WBG EHSGs; integrate all E&S requirements into bidding documents and require contractor C-ESMPs approved before mobilization. - Prepare detailed and comprehensive hazardous material and waste management plan. - Maintain PIU E&S capacity (Environmental Specialist, Social Specialist) and define roles for supervision engineers, contractors, and EPA - Deliver a capacity-building plan and budget.
ESS 2: Labor and Working Conditions	Relevant	ESS 2 sets out for the client to promote sound worker-management relationships and enhance the development benefits of the project by treating workers in the project fairly and providing safe and healthy working conditions.	The project should adopt and follow the labour management procedure (LMP), which documents labour requirements and identify the risks associated with project activities together with aspects of welfare in line with legal requirements and good international and industry practices.
ESS 3: Resource Efficiency and Pollution Prevention and Management	Relevant	ESS3 sets out the client's and subcontractor's obligation to apply technically and financially feasible measures to improve efficient consumption of energy, water, raw material, and other resources. Such	- Carrying out occupational risk assessment to identify and analyze those factors that could represent a serious risk to health or safety at work. - Apply the WBG General EHS Guidelines and ICT sector good practices on energy efficiency, air emissions, and waste management across all project facilities and activities.

		measures shall integrate cleaner production principles into the product design and production processes to conserve raw material, energy, water and other resources. This also includes addressing project-level impacts of climate change and considering the impacts of climate change on the selection, siting, planning, design, and implementation of projects.	- During design, ensure landing stations, data centers, and network facilities adopt energy-efficient and low-GHG technologies, targeting improved Power Usage Effectiveness (PUE), high-efficiency cooling, and non- Ozone Depleting Substances (non-ODS), low-Global Warming Potential (low-GWP) refrigerants. - Require each ESMP or ESIA to assess resource use (energy, water, materials) and propose measurable efficiency measures (e.g., LED lighting, renewable/backup hybrid power, smart cooling systems, water recycling). - Prepare e-waste management plans, including management of legacy materials such as PCB and implementing procedures for recycling e-waste by licensed facilities. - Appropriate waste management practices should be upheld throughout the project cycle. - Ensuring that new support equipment does not contain hazardous materials. - Contractor ESMPs to include occupational health and safety risk prevention strategies whose effective implementation will ensure prevention of workers from suffering accidents or illnesses. - Apply guidance on OHS monitoring that should maintain a record of occupational accidents and diseases and dangerous occurrences and accidents.
ESS 4: Community Health and Safety	Relevant	ESS4 sets out the client's obligation to address the health, safety, and security risks and impacts on project-affected communities to avoid adverse impacts on the health and safety of community members.	- Applying the principles of proportionality, carry out a community health and safety (CHS) risk assessment to determine the nature, scope and severity of potential impacts such as hazardous materials and waste, resettlement framework (RF) and ESMF on the public, including determination of procedures for risk avoidance, minimization

		The influx of labor could also expose local communities to public health risks and communicable diseases, such as sexually transmitted infections.	and mitigation. - Adopt protocol to ensure medical screening of project personnel, including contractors, prior to moving to the project area as a way to avoid spread of communicable diseases. - Prepare Contactor Management Plan and Operating frameworks to include Code of Conduct and anti-sexual harassment, exploitation and abuse, including training for contractors on expectations and disciplinary measures. - Proportionate to the project's potential risks, the project will carry out a Security Risk Assessment (SRA) and commit contractor to prepare a Security Management Plan (SMP) that recommends mitigation actions to address security risks and impacts on communities, using an age, gender, and diversity lens. The SRA will include vetting security personnel to ensure they are not implicated in past abuses, including harassment, abuse, or exploitation, providing adequate training in the use of force and appropriate conduct, and transferring equipment. - Develop strategies for community engagement including how to manage the important link with the community liaison/social management side to ensure complaints raised by communities around environmental- and social-related issues (such as improper waste disposal or dust from excavation and trenching or noise emission from equipment and machinery, GBV/SEA, management of private security personnel, management relationship with public security forces, etc.) get addressed by the environmental and social sides of the operation and resolution feedback through the grievance mechanism (GM). - Establish a fit-for-purpose, gender-sensitive GM for affected communities for addressing CHS grievances including improper

			waste management, GBV/SEA, management of private security personnel, etc.
ESS5: Land acquisition, Restriction of land use and Involuntary Resettlement	Relevant	ESS5 aims to avoid involuntary resettlement and forced eviction and mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use.	The only project activity with potential of land acquisition is the laying of the fiber optic cables in terrestrial landscape. However, it is anticipated that there will be restrictions on land use and resources. - The ESMF has included an outline of screening procedures and voluntary approaches. - Should there be a possibility of land acquisition, other safeguards such as Resettlement Framework are being prepared to provide guidance on the preparation of Resettlement Action Plans when site locations will be defined. - In cases of land use and resource restrictions, Policy Frameworks will be developed for specific subprojects.
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant	ESS6 sets out the client's responsibilities to protect and conserve biodiversity and habitats, promote sustainable management of living natural resources and support the livelihoods of local communities.	The two activities that have potential to affect biodiversity are the submarine cable and the underground on-land fiber optic line connecting to the landing station. The latter has no significant potential to affect biodiversity with the understanding that they will be laid along the road corridor that is already devoid of any vegetation. On the other hand, the lack of information on the path of the submarine cable means a *biodiversity impact assessment* can be performed to predict impacts in this case and provide guidance on the preparation of a Biodiversity Action Plan. - Screen and map sensitive habitats for all marine and terrestrial subprojects. - Conduct targeted ecological surveys before design. - Prioritize avoidance through route optimization and HDD at landfalls to bypass sensitive habitats; bury and micro-site cables to reduce disturbance.

			- Apply Critical Habitat procedures where triggered, ensuring no net loss for Natural Habitats - Prepare a Biodiversity Management Plan/for subprojects with habitat risks.
ESS7: Indigenous Peoples/Sub- Saharan African Historically Underserved Traditional Local Communities	Currently not relevant		The Republic of Liberia does not have such groups of people and thus it is currently not relevant to this project.
ESS 8: Cultural Heritage	Relevant	ESS8 sets the client's obligation to protect cultural heritage from the adverse impacts of project activities and support preservation and promote equitable sharing of benefits from the use of cultural heritage.	- The project will include a chance find procedure (CFP), in all contracts related to construction awarded under the project. In the event that cultural heritage resources are discovered, strictly apply the CFP by immediately stopping all work in the vicinity, cordoning the area, notifying a designated authority, and securing the area until a qualified specialist can assess the find and determine the next steps. - Develop a waste management plan to ensure that no damage through debris disposal or noise pollution is caused at any sites of cultural significance. Identify appropriate sites for waste storage and disposal of any waste generated by the project activity. - Enlist the participation of a qualified archaeological monitor, especially during seabed and beach excavation activities in the cable corridor. - Where activities must be undertaken near a cultural heritage site, the following measures should be taken: a) Train/make aware the construction contractor of how to deal with these sites and ensure that there is supervision from contractors' side for the management of all such sites.

			b) Restore all sites to their original shape post construction. It is advisable to take photographs, measurements, etc. of the CRC if working in the same location, in case it needed for future reference while restoring the site. c) Identify most appropriate time to undertake construction to minimise disturbance, e.g. avoid any special prayers/festivals for constructing in the vicinity of the CRC or on its access route. d) Avoid keeping power backup systems such as generators near the CRC. e) Identify appropriate sites for material storage.
ESS 9 (Financial Intermediaries)[6]	Currently not relevant for project activities to be implemented in Liberia		The project does not anticipate working with FIs who will receive financial support from the Bank to finance subprojects.
ESS10: Stakeholder Engagement and Information Disclosure	Relevant	ESS10 sets out the client's obligation to engage in open and transparent consultation with project stakeholders to ensure the project's inclusive process and sustainability.	The client will engage with and provide sufficient information to stakeholders throughout the project's life cycle in a manner appropriate to the nature of their interests and the potential environmental and social risks and impacts of the project.

[6] ESS9 becomes relevant to the Liberia project if Fonds Africain de Garantie et de Coopération Économique (FAGACE), a licensed regional guarantee fund, will provide partial credit guarantees to eligible issuers. If confirmed that FAGACE will play a key role in the Liberia Project, then, it will be required to develop and maintain an Environmental and Social Management System (ESMS), which will serve as a comprehensive framework for integrating environmental and social risk management into the decision-making processes of these institutions. The ESMS will identify potential environmental and social risks linked to digital transformation projects and establish procedures to manage and mitigate those risks in line with the Environmental and Social Standards (ESSs). It will also include monitoring and reporting mechanisms to track the environmental and social performance of funded projects, ensuring compliance with national regulations and international standards. By putting in place a robust ESMS, institutions such as FAGACE will be better equipped to guarantee that private capital mobilized through bond issuance contributes to digital infrastructure development in a socially inclusive, environmentally sustainable, and fiscally responsible manner.

3.6 Comparison of the World Bank ESS5 with National Requirement

There are significant gaps between the requirements of Liberia laws on resettlement and compensation and those laid out in ESS5. These are presented in Table 3.6.

Table 3. 6: Comparison of Liberian and World Bank Requirements on Resettlement

Compensation for Land Rights	The Constitution of Liberia (1986) and Land Rights Act (2018) provide for compensation to lawful landholders for land compulsorily acquired for public purposes. Customary land ownership is recognized, but compensation is mainly directed at those with documented or legally recognized rights.	ESS5 requires compensation for all categories of land users—formal, customary, and informal occupants. Compensation must be at replacement cost, ensuring restoration of livelihoods and access to land or resources.	Both frameworks protect legal owners, but ESS5 extends compensation to informal and customary users and emphasizes livelihood restoration.	Explicitly include customary and informal land users in eligibility criteria, and ensure compensation includes livelihood restoration measures beyond land value.
Compensation for Improvements on Land	The Land Rights Act (2018) provides compensation for structures, crops, and improvements based on assessed market value.	ESS5 mandates full replacement cost compensation, including rebuilding costs, labor, and relocation support.	Liberian law compensates improvements but may not meet full replacement cost as per ESS5.	Adopt replacement cost principles for all improvements to ensure fair and adequate compensation.
Resettlement Compensation	Liberian law allows resettlement or compensation for land acquired for public purposes but lacks detailed resettlement planning procedures.	ESS5 requires a Resettlement Plan (RP) that includes housing, livelihood restoration, and social integration to improve living standards.	The Liberian framework focuses mainly on physical relocation and asset compensation, not livelihood or social recovery.	Develop a Resettlement Plan (RP) that includes livelihood restoration, social integration, and community participation in resettlement processes.
Economic Displacement	Compensation is provided for loss of crops, business premises, or income sources due to public acquisition.	ESS5 recognizes both physical and economic displacement, requiring livelihood restoration or improvement to pre-displacement levels.	Both recognize economic displacement, but ESS5 includes stronger provisions for livelihood recovery.	Include livelihood restoration programs, especially for coastal, fishing, and informal trading communities affected by digital infrastructure works.
Grievance Mechanism	PAPs may seek redress through traditional authorities or the judicial	ESS5 mandates the establishment of a project-level Grievance	Liberia's grievance channels are often slow and costly;	Establish a multi-level GRM (community, district, and

	system, but there is no formal project-level grievance mechanism.	Redress Mechanism (GRM) early, accessible to all affected persons.	ESS5 promotes proactive, accessible mechanisms.	national levels) integrated with local systems (e.g., chiefs, elders, and local government).
Eligibility for Compensation	The Land Rights Act (2018) compensates lawful and customary landholders but does not clearly cover informal occupants or encroachers.	ESS5 recognizes three categories: (i) formal legal rights, (ii) recognizable claims, and (iii) no legal rights but affected persons (informal settlers).	ESS5 provides broader coverage than Liberian law.	Expand eligibility to include informal and seasonal users, ensuring inclusive compensation and livelihood support.
Timing of Compensation and Resettlement	Liberian law allows possession before full compensation, often leading to delays in payment.	ESS5 requires that compensation and resettlement occur prior to displacement.	ESS5 provides clearer and stricter timing requirements.	Ensure compensation is paid and resettlement completed before displacement, consistent with ESS5.
Completion of Resettlement and Compensation	Once assessed compensation is paid, the process is considered complete; limited follow-up or livelihood monitoring.	ESS5 requires that resettlement and compensation are complete only when livelihoods and living standards are restored or improved.	ESS5 requires ongoing monitoring; Liberia lacks this requirement.	Implement post-resettlement monitoring and livelihood audits under WARDIP-SOP2 to verify PAP recovery.
Livelihood Restoration and Assistance	No specific legal requirement for livelihood restoration after displacement; compensation is limited to asset loss.	ESS5 mandates livelihood restoration and improvement as part of resettlement.	Liberia lacks a structured livelihood restoration policy.	Introduce livelihood restoration and training programs, especially for fishing and coastal communities losing access to resources.
Consultation and Disclosure	Liberian law requires notification and consultation during acquisition but lacks formal provisions for ongoing engagement or disclosure.	ESS5 mandates continuous consultation, disclosure of information, and participation of PAPs in resettlement planning.	ESS5 emphasizes ongoing engagement, transparency, and participation.	Conduct continuous consultations and disclosures, ensuring PAPs' involvement throughout project implementation.
Vulnerable Groups	There are no explicit legal provisions prioritizing vulnerable groups, though the Land Rights Act recognizes women's land rights.	ESS5 requires special measures for vulnerable persons (women, elderly, disabled,		

3.7 The World Bank Group General and Industry-Specific Environmental, Health and Safety Guidelines

The WBG Environmental, Health, and Safety (EHS) Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). When one or more members of the World Bank Group are involved in a project, these EHS Guidelines are applied as required by their respective policies and standards. These industry sector EHS guidelines are designed to be used together with the General EHS Guidelines document, which provides guidance to users on common EHS issues potentially applicable to all industry sectors. In the case of this project, the EHS for telecommunications is used together with the General EHS Guidelines document.

The following EHSG of the World Bank Group will be relevant to this project:

Air Emissions and Ambient Air Quality. This guideline applies to facilities or projects that generate emissions to air at any stage of the project life cycle. It complements the industry-specific emissions guidance presented in the Industry Sector, Environmental, Health, and Safety (EHS) Guidelines by providing information about common techniques for emissions management that may be applied to a range of industry sectors. This guideline provides an approach to managing significant sources of emissions, including specific guidance for the assessment and monitoring of impacts. It is also intended to provide additional information on approaches to emissions management in projects located in areas of poor air quality, where it may be necessary to establish project-specific emissions standards. Construction and rehabilitation work at different sites to be undertaken under the project are expected to generate some level of dust.

Hazardous Material Management: These guidelines apply to projects that use, store, or handle any quantity of hazardous materials (Hazmats), defined as materials that represent a risk to human health, property, or the environment due to their physical or chemical characteristics. Hazmats can be classified according to the hazard as explosives; compressed gases, including toxic or flammable gases; flammable liquids; flammable solids; oxidizing substances; toxic materials; radioactive material; and corrosive substances. The potential use of chemicals in implementing project activities such as lead-acid batteries and diesel-fueled power generators makes this guideline relevant to the project.

Waste Management: These guidelines apply to projects that generate, store, or handle any quantity of waste across a range of industry sectors. It is not intended to apply to projects or facilities where the primary business is the collection, transportation, treatment, or disposal of waste. Construction (stations construction and rehabilitation) and domestic waste (from the numerous beneficiaries to be engaged) expected to be generated from various sites make this guideline relevant to the project's implementation. Despite their advantages, fiber optic cables still contribute to e-waste when they are decommissioned. The specialized materials and processes required in their manufacturing make it difficult to recycle them. Additionally, as fiber optic networks expand, the demand for cables and related equipment will increase, potentially leading to more waste being generated. With the current underdeveloped state of recycling

infrastructure for all kinds of waste in Liberia, including fiber optics, any increase in telecommunication may lead to pollution.

Noise Management: This guideline addresses the impacts of noise beyond the property boundary of the facilities or projects being implemented. Thus, it seeks to address the public health risks of noise that may be generated from the project, using diesel-fueled power generators, excavators and the handheld compactor at the landing sites.

Occupational Health and Safety: This guideline provides guidance and examples of reasonable precautions to manage principal occupational health and safety risks. Although the focus is placed on the operational phase of projects, much of the guidance also applies to construction and decommissioning activities. Activities under WARDIP-SOP2 Liberia implementation sites, such as land clearing, excavation, hauling, cable laying, trenching, drilling, cable landing station and tower erection, etc., expose workers and beneficiaries to one form of occupational risk or the other. The guidance provided under this guideline will help manage such risks.

Community Health and Safety: Specific guidelines under traffic safety, water quality and availability, disease prevention and construction and decommissioning presented in this guideline are relevant to implementing the project's sub-project activities, such as rehabilitation/construction works. The project management should consider appropriate measures concerning communal infectious diseases to prevent project activities from being a source of contamination or a vector for spreading considering WHO recommendations and Liberia's requirements regarding measures to combat the spread of all infectious diseases. Additionally, the project should put in place mechanisms to promote a healthy and safe environment for all, including beneficiaries.

4.0 ENVIRONMENTAL AND SOCIAL BASELINE

4.1 Location

The Republic of Liberia is located at latitudes 4°21' N and 8°33' N of the equator and longitudes 11°28'W and 7°32'W. Liberia covers 111,369km^2, and is located entirely within the humid Upper Guinean Forest Ecosystem in West Africa on the Atlantic Coast. The area of Liberia's Exclusive Economic Zone (EEZ) is 229,700 km^2, extending 370.4 km (200 nautical mi) seaward from shore.

The country is located along the Atlantic Coast of West Africa, between Sierra Leone, Cote d'Ivoire and Guinea. The territory is divided into 15 administrative counties. The capital, and by far the largest town, is Monrovia, located in Montserrado County, with a population of one million. The rest of the country is mainly agricultural or forested, with other major towns having diverse populations of inhabitants.

Figure 4. 1: Map of Liberia Showing Counties and Major Cities

4.2 Natural and Biophysical Characteristics

4.2.1 Climate

Liberia's climate consists of two separate climate regimes: the equatorial climate regime restricted to the southernmost part of Liberia; Montserrado, Grand Bassa, Maryland, Maryland, Grand Kru and Sinoe, where rainfall occurs throughout the year and the tropical regime dominated by the interaction of the Inter-tropical convergence zone (ITCZ) and the West African Monsoon, which include Nimba, Bong, Bomi, Margibi and Grand Cape Mount counties. Because of Liberia's coastal location, the southwesterly flow of the monsoon prevails most of the year, maintaining a thin layer of moist marine air near the surface, although the Harmattan Wind

typically intrudes for brief periods during the winter in coastal areas. This interaction of the ITCZ with the monsoon flow produces the summer wet season-winter dry season characteristic of a tropical climate.

4.2.2 Land Cover and Vegetation

Liberia is situated within the Upper Guinean Forest that extends from Guinea at the north-western extreme to the eastern limit in Cameroon. The Upper Guinean Forest is fragmented, and Liberia is estimated to account for more than half of West Africa‘s remaining Upper Guinean tropical forest. The climax vegetation over most of Liberia is forest, which covers about 4.39 million hectares or 45% of Liberia’s land area (FDA, 2006). The most recent forest classification (2006) included 2.42 million hectares of closed dense forest in Maryland, Grand Gedeh, Grand Kru and Sinoe. Further, 1.02 million hectares of open dense forest and 0.95 million hectares of agriculture/degraded forest are in Nimba, Margibi, Bomi, Grand Bassa, Bong, Montserrado and Grand Cape Mount.

4.2.3 Physiography

Liberia has four topographical regions at different altitudes, each with distinct physical features. Along the seacoast is the coastal plain 560km covering Montserrado and Grand Bassa. Next to the coastal plain is the belt of inundated plateau followed by the belt of high land and rolling hills in the north and northwest respectively. Most mountains are located in the northern part of Liberia which include Bong and Nimba.

4.2.4 Soil

There are four 4 main Liberian soil types. The soils range from weakly developed muds and hydromorphic clays along the coast in areas such as Montserrado, Grand Bassa, Grand Kru, Sinoe and Maryland. There are inland swamps, shallow soils on the plateaus and mountains and lateritic hills and terraces in the north area such as Nimba. The soil patterns are determined by differences in age, parent material, physiography, and present and past climatic conditions. Latosols are the most widespread soil type, followed by lithosols, regosols and alluvial or swamp soils that can be found in Grand Cape Mount, Margibi, Bong and Bomi.

4.2.5 Hydrography

Freshwater bodies cover 15,050 km2 (14%) of the total area of Liberia. These include rivers, lakes, lagoons, creeks and streams that drain to the Atlantic coast in a general northeast–southwest direction (Montserrado and Grand Bassa).

4.2.6 Rivers

There are six major rivers, the Mano, Lofa, St. Paul, St. John, Cestos and Cavalla. Combined, these rivers account for 66% of the country’s water resources, draining about 3% (UNEP, 2004). The Cavalla River is the longest river and is shared between Liberia and Côte d'Ivoire.

4.2.7 Lakes

There are only two major lakes in Liberia: Lake Shepherd (7,284 ha) located in Maryland County; and, Lake Piso, which can be more accurately described as an open coastal lagoon, in Grand Cape Mount County. Both lakes are situated adjacent to the Atlantic Ocean.

4.2.8 Wetland

Liberia is party to the Convention on Wetlands of International Importance and has five designated Ramsar Wetland Sites covering a surface area of 95,879 ha. Liberia has numerous brackish wetlands, three of which have been declared Ramsar sites (wetlands designated as internationally important under the Convention of Wetlands): Lake Piso (Grand Cape Mount); Marshall Wetlands and Mesurado Wetlands. Other identified coastal wetlands include the Bassa Bwa Lagoon in Grand Bassa and the mouths of the Mano, Lofa, St. Paul, St John, Cestos, Sehnkwehn and Cavalla rivers (Ramsar.Wetlands.org, 2013). Liberia does not support extensive freshwater wetlands because the terrain slopes fairly constantly from the high northern border to the sea. Two small freshwater wetlands have been designated as Ramsar sites: Gbedin Wetlands in Nimba and Kpatawee Wetlands in Bong.

4.2.9 Coast

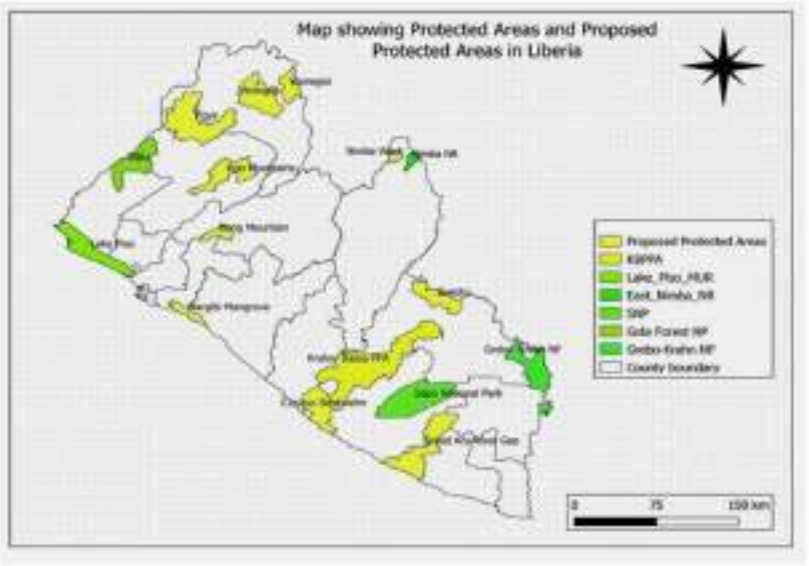
The coastline of Liberia is 579 km in length, extending from the western border with Sierra Leone to the eastern border with Côte d'Ivoire. Approximately 90% of the coastline consists of sandy beaches that vary from 20-25 meters wide at the narrowest, to 60-80 meters at the widest beaches along the south-eastern extent. The coastline has lagoons, estuaries, bays and brackish wetlands covering areas such as Montserrado, Grand Bassa, Sinoe, Grand Kru and Maryland Counties.

4.2.10 Protected Areas

The designated protected areas (PAs) by law are:

- Sapo National Park. Established in 1983, and covering 180,400 hectares of primary forest in Sinoe County,
- East Nimba Nature Reserve. Considering the international importance of Mount Nimba and the Mount Nimba UNESCO World Heritage Sites in Guinea, Côte d'Ivoire and Liberia, this Reserve was gazetted in 2003. The creation of this protected area is essential in protecting the integrity of the unique Nimba highlands ecosystem and its endemic species of global conservation concern.
- Lake Piso Multiple Use Reserve. This PA was established in 2011 in Grand Cape Mount County.
- Gola Forest National Park. Established in 2016, it has been internationally recognized as an important conservation area, most notably due to its transboundary nature with the Gola Rainforest National Park in Sierra Leone. The key long-term aim of the Gola Forest is the conservation of unique wildlife and biodiversity and eco-system services while ensuring the livelihood of the forest edge communities who depend on the forest resources for their survival and economic development within the greater Gola landscape.
- Grebo- Krahn National Park in Grand Gedeh. Established in 2017, it has been internationally recognized as an area of outstanding conservation value, most notably due to its location on center (its location is West of the Taï-Grebo-Krahn-Sapo (TGKS) Transboundary Forest Complex), the forest landscape connecting the Ivorian forests (Taï National Park and Cavally Classified Forest) with the Liberian forests (FMC F and Sapo National Park). The key long-term aim of the Grebo-Krahn National Park is the conservation of unique wildlife and biodiversity and eco-system services while ensuring

the livelihood of the forest edge communities who depend on the forest resources for their survival and economic development within the greater TGKS forest landscape.



At least eight additional protected areas have been proposed by the FDA and pre-gazettement activities have been completed to various levels. These Proposed Protected Areas (PPA) are Wonegizi, Wologizi, Foya, Kpo Mountains, Krahn-Bassa (to be called Kwa National Park) in 3 Counties (Sinoe, Grand Gedeh and RiverCess), Cestos-Senkwehn (RiverCess County), Grand Kru-River Gee and Marshall Wetlands).

4.2.11 Marine/Coastal Protected Areas and Sensitive Habitats

Overview

Liberia's marine and coastal environments are of high ecological, economic, and social importance. The country's 570 km coastline is home to diverse habitats, including mangroves, lagoons, estuaries, sandy beaches, and wetlands, which support rich biodiversity and provide critical ecosystem services. These areas are under increasing pressure from human activities, climate change, and development, making the establishment and management of Marine and Coastal Protected Areas (MCPAs) and the conservation of sensitive habitats a national priority.

Marine and Coastal Protected Areas in Liberia - Legal and Policy Framework

Liberia has developed a robust legal framework for the protection of its marine and coastal environments:

- **National Reform Law of Liberia**: Mandates the establishment of a Protected Forest Areas Network covering at least 30% of Liberia's forested area (about 1.5 million hectares).
- **National Wildlife Conservation and Protected Area Management Law**: Provides statutory protection for forests, mangroves, and marine species. Section 6.12(a) specifically mandates special protection for mangrove species.

- **Fisheries and Aquaculture Management Law**: Section 4.6 mandates the establishment of protected areas or Special Management Areas within Liberia's fisheries waters, emphasizing inter-agency collaboration.
- **Environmental Protection and Management Law (EPML)**: Authorizes the Environmental Protection Agency (EPA) to establish protected areas in rivers, lakes, or wetlands and prescribes penalties for violations.

Key Marine and Coastal Protected Areas

Liberia's protected area network has grown since the establishment of Sapo National Park in 1983. The network now includes both terrestrial and marine/coastal sites:

- **Ramsar Wetlands of International Importance in Liberia**: Liberia is party to the Ramsar Convention and has designated five Ramsar sites, several of which are coastal:
    - **Lake Piso** (Grand Cape Mount County): Liberia's largest coastal lagoon, designated in 2003, and surrounded by wetlands and lowland forests, supporting mangroves, fish nurseries, sea turtles, and a variety of birds and mammals. The site is important both as a nursery and spawning ground for fish and sea turtles and as feeding and roosting places for large numbers of shore and sea birds. Mammals such as antelopes, duikers, monkeys, bushbucks, and a few crocodiles are also found in the area.
    - **Mesurado Wetlands** (Montserrado County): A wetland area of 6,760 ha, designated in 2006. It is known for its mangrove species and a habitat for birds, crocodiles, and other wildlife. It provides a favorable habitat and feeding ground for several species of birds including the African spoonbill (*Platalea alba*), Common Pratincole (*Glareola nuchaltis*) and Curlew (*Numenius arquata*). It also hosts the vulnerable African dwarf crocodile, the Nile crocodile and the African sharp-nosed crocodile. It plays a key role in shoreline stabilization and sediment trapping but is threatened by urban encroachment, pollution, and unregulated fishing.
    - **Marshall Wetlands** (Margibi County): A mangrove wetland designated in 2006, notable for its large mangrove trees and role in flood control and sediment trapping Important for biodiversity, proposed as a nature reserve. The wetland is chiefly a mangrove type with mature trees reaching up to 30m. In addition to the Red Colobus monkey, a number of bird species listed by the CMS appear in the area, such as the Glossy Ibis, Lesser Kestrel and Common Pratincole. The Marshall protected area extends from Margibi County to Grand Bassa County.
    - **Cestos-Senkwehn Wetlands** (Sinoe & Rivercess Counties): Inland riverine, proposed as a nature reserve.
    - **Gbedin Wetlands:** It is a 25-hectare site in Nimba County designated in 2006 and known for its swampy terrain and importance for migratory birds. The paddy fields provide a good feeding ground for many bird species including Palaearctic and Nearctic migrants as well as resident breeders such as the Plover (*Charadrius dubius*), Bar-tailed Godwit (*Limosa lapponica*) and the Forbes' Plover (*Charadrius*

forbesi). The endemic otter shrew (*Micropotamogale lamottei)* also occurs in the area.

- **Kpatawee Wetlands** (Nimba and Bong Counties): Inland riverine wetland, designated in 2006 as Ramsar site. This site is known for the Kpatawee waterfall and is a habitat providing wintering grounds for large numbers of common Sandpipers and Palaearctic migrant species such as Little Ringed Plover and Greenshanks and for various wildlife. The endangered Three-cusped Pangolin and Water Chevrotain occur at the site, too.

- **Other Coastal Wetlands**: Bassa Bwa Lagoon, Bafu Bay, Lake Shepherd, and the mouths of major rivers (Mano, Lofa, St. Paul, St. John, Cestos, Sehnkwehn, Cavalla) are recognized as important but not all are formally protected.
- **Sensitive Habitats**
- **Mangroves**: Liberia's mangroves are vital for coastal protection, carbon storage, and as breeding grounds for fish and other marine life. They are under threat from fuelwood collection, urban expansion, and pollution.
- **Seagrass Beds**: Important for fish nurseries and coastal resilience, but data on their extent and status is limited.
- **Sandy Beaches and Lagoons**: Serve as nesting sites for endangered marine turtles and support migratory birds.
- **Estuaries and Tidal Creeks**: Provide critical habitats for fish, birds, and other wildlife.

Biodiversity and Conservation Value

Liberia is part of the Upper Guinea Forest biodiversity hotspot and supports:

- Over 2,000 vascular plant species (225 tree species)
- 150 mammal species (including chimpanzees, pangolins, and pygmy hippos)
- 600+ bird species (including endemics and migratory species)
- 75 reptile and amphibian species
- Five of the world's seven marine turtle species, including the endangered green and leatherback turtles.

Key biodiversity areas (KBAs) have been identified, including the Cestos-Senkwehn region and the southeastern forest block, which are priorities for conservation due to the presence of globally threatened species.

Threats and Management Challenges

- **Urbanization and Pollution**: Especially acute in the Mesurado Wetlands, where solid waste, industrial effluents, and unregulated development threaten habitat quality.
- **Overfishing and Illegal Fishing**: Both artisanal and industrial fishing pressure marine resources, with inadequate enforcement of regulations.

- **Mangrove Degradation**: Driven by fuelwood collection and land conversion.
- **Climate Change**: Sea-level rise, coastal erosion, and increased storm frequency threaten both human communities and natural habitats.
- **Lack of Management Plans**: Many protected areas, including Ramsar sites, lack formal management plans and enforcement capacity.

Summary Table: Key Marine and Coastal Protected Areas in Liberia

Name	Type/Status	Location	Conservation Status	Key Features/Threats
Lake Piso	Coastal Lacustrine	Grand Cape Mount	Ramsar, Proposed Reserve	Mangroves, fish nursery, sea turtles
Mesurado Wetlands	Coastal	Monrovia, Montserrado	Ramsar	Mangroves, birds, crocodiles, urban threats
Marshall Wetlands	Coastal Lacustrine	Margibi	Proposed Reserve	Biodiversity, under pressure
Cestos-Senkwehn	Inland Riverine	Sinoe & Rivercess	Proposed Reserve	Fish, birds, mammals
Gbedin Wetlands	Inland Riverine	Nimba	Ramsar	Freshwater wetlands
Kpatawee Wetlands	Inland Riverine	Bong	Ramsar	Freshwater wetlands

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Conclusion

Liberia's marine and coastal protected areas and sensitive habitats are globally significant for biodiversity and vital for the livelihoods and resilience of coastal communities. While the legal framework is strong, effective management and enforcement remain challenges. Ongoing World Bank and partner projects are working to strengthen institutional capacity, develop management plans, and promote sustainable use of marine and coastal resources. Continued investment in monitoring, community engagement, and climate adaptation will be essential to safeguard these critical habitats for future generations.

4.3 Socio-economic Characteristics

4.3.1 Population Characteristics

The 2022 Liberia Population Housing Census (LPHC) indicates a total population of 5,178,484 (98.6%) living in regular households, compared to 50,223 (1.0%) who lived in institutional households (boarding schools, orphanages, barracks, prisons, camps, hotels, hospitals, etc.) and 21,480 (0.4%) who are floating population or homeless. The floating population in 2008 was 0.3 percent.

In terms of population by counties, Montserrado County is the largest with more than 1.9 million people. Nimba, Bong, Lofa, and Margibi are large counties with populations ranging from 301,000 to 500,000 people while Grand Bassa, Grand Gedeh, Grand Cape Mount, and Maryland are

medium-sized counties with populations between 150,000 and 300,000. Small counties are those with a population of less than 150,000, such as Bomi, River Gee, Grand Kru, Gbarpolu, and Rivercess. The annual population growth rate of Liberia remained almost the same from 1962 to 1984. By 2008, it had declined to 2.1 percent. This decline could be attributed to the civil conflict in 1990. However, between 2008 and 2022, the annual growth rate increased to 3.0 percent, which could be due to the return of displaced people after the civil conflict.

4.3.2 Age and Sex

There is a similar proportion of males and females among the population in their early ages (0 to 34 years old), while there are more males than females among the adult population (35 to 74 years old). Among the elderly population (75 years or over) however, there are more females than males. The population under 18 years of age (2,176,918) is close to half (41.5%) of the total population, while the population in the 18-34 years old group (1,737,253) is about a third (33.1%). This translates to about three- quarters (74.6%) of the population being under 34 years of age.

4.3.3 Population Density

Montserrado, Margibi, Maryland, and Nimba are the most densely populated Counties in Liberia. Other Counties such as Grand Kru, River Gee, Grand Gedeh, Sinoe, and Rivercess are less densely populated. The population densities of Grand Kru and River Gee Counties increased by more than 85 percent between 2008 and 2022.The percentage increase in the population of Grand Gedeh (73.1%) and Montserrado (71.8%) is about three-quarters over the same period.

Figure 4. 2: Population Density Map of Liberia Indicating the Density of Counties

4.3.4 Average Household Size

The average size of Liberian households has been declining steadily in the last 18 years (1984–2022). It increased from 5.7 percent in 1974 to 6.2 percent in 1984 but has since declined to 4.4 in 2022. Grand Kru, River Gee, Sinoe, Grand Gedeh, Nimba, Lofa, and Maryland have average household sizes greater than the National Average of 4.4.

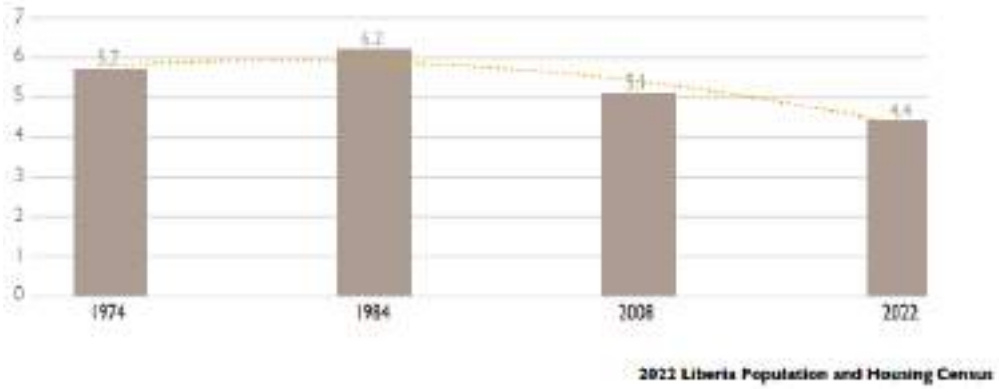

Figure 4. 3: Percentage Distribution of Average Household Size (1974–2022)

4.3.5 Employed Population

The proportion of children (5-14 years) who participated in economic activity in the 7 days prior to the Census Night of 2022 is 1.4 percent, and among the population aged 65 years or over, 1.0 percent participated in economic activity. 26.4 percent of Liberians aged 15 years or over participated in economic activity, which is allowed by the Labour Law. Participation in economic activity is concentrated in four counties. One-third of the working population in Liberia is found in Montserrado County. Bong, Lofa, and Nimba counties together constitute another third of the population that participated in economic activity.

4.3.6 Religion

Liberia is predominantly a Christian society (85%) with about 12 percent of the population being Muslim, and the part of the population affiliated with all other religions is less than 1 percent. It was observed that 2.6 percent of the population is not affiliated with any religion.

4.3.7 Education

About 60 percent of the population in Liberia is literate. This proportion is higher in urban (71.8%) than in rural (45.1%) areas, and higher among males (65.1%) than females (54.6%), see Figure 4.4. A little over one-third of the population is currently attending school with an equal proportion of males and females. There are more persons currently attending school in the urban (40.7%) than in the rural (27.2%) areas. The proportion of males (21.8%) that completed school is about one and a half (1.5) times that of females, and it is about three times higher (2.7 times) in the urban areas than in rural areas. The drop-out rate is higher in the rural areas (15.6%) than in the urban areas (13.0%).

More than two-thirds (67.9%) of the population who have completed school have completed secondary school. This proportion is not significantly different between urban and rural areas. About 18 percent of those who completed school have completed the tertiary education cycle. The proportion of the population that has completed tertiary education is two times higher in the urban areas than in the rural areas. Similar proportions were observed among males and females.

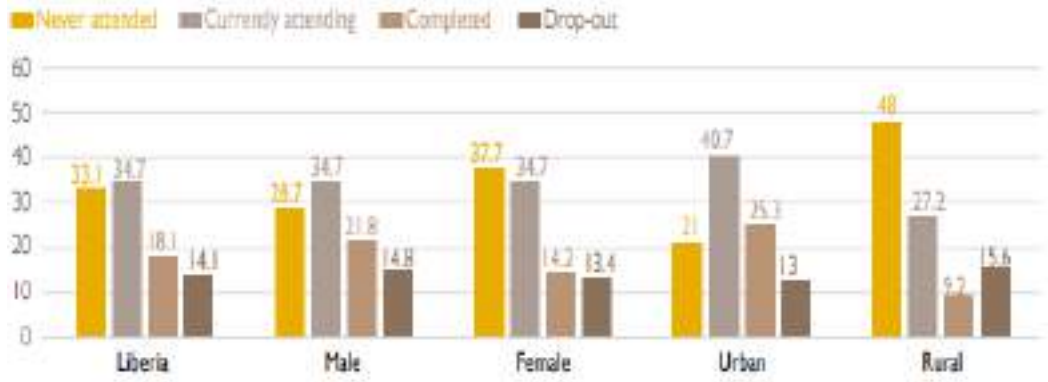

Figure 4. 4: Percentage Distribution of the Population 3 Years and Over by School Attendance Status, Sex, and Place of Residence

4.3.8 Household Ownership of Dwelling

About two-thirds (63.3%) of households own their dwellings, while more than 28 percent of them live in rented or mortgaged houses. Only 0.5 percent of households are living in homes provided by government.

4.3.9 Main Source of Drinking Water for Household

The source of drinking water for about 70 percent of households is considered improved. These include sources such as pipe water, borehole, sachet water, bottled water and protected wells. The proportion of the population that was drinking from improved water sources is higher in urban (76.6%) than rural (60.4%) areas. In 2008, about 60 percent of the population used to drink from improved sources of water with higher proportions in the urban (78.4%) than in rural (42.2%) areas. The proportion of the population drinking from improved sources of water has increased in 2022, with a corresponding reduction in the population drinking from unimproved sources by about 10 percentage points.

4.3.10 Main Source of Lighting for Households

About a quarter of the households use electric power from Public Electricity Grid (a significant increase of 23.9 percentage points compared to 2008), while about 5 percent generates their own electricity to provide lighting in the night or when necessary. Overall, 32.7 percent of households use electricity and 5.7 percent use solar panels to provide light. The proportion of the population using electricity in 2008 was 4.6 percent, of which 3.2 percent generated their own electricity. This proportion had increased significantly by 2022, when 32.7 percent of the population were using electricity. The use of electricity is found mostly in urban areas (53.7%), while battery torch lights are the main source of lighting in rural areas (73.5%). The main source of electricity in rural areas is solar panels.

4.3.11 Type of Toilet Facility for Household

About 40 percent of households use flush toilet facilities, and about one-third (32.0%) use open defecation (outback or beach) or have no toilet facility at home. The proportion of households that use flush toilet facilities was 13.5 percent in 2008, indicating a significant increase of 26.7 percentage points. More than half of the households in the rural areas use the beach and/or riverside. More than a quarter of the households in urban areas use the bush (outback) while about 35 percent use a covered pit latrine outside the homes.

4.3.12 Agricultural Households

In about 30.2 percent of households, there is at least one member of the household engaged in agriculture. More than 7 in every 10 households in Lofa are engaged in agriculture while those are more than 5 households in Nimba and Rivercess. Montserrado has the lowest (8.3%) proportion of households that are engaged in agriculture. About one-fifth (19.5%) of the total number of agriculture households in Liberia are in Nimba County. Nimba (19.5%), Lofa (15.0%), Bong (14.5%), and Montserrado (10.4%) together constitute about 60 percent of the total agricultural households. Crop production constitutes the major agricultural activity. More than three-quarters (76.1%) of agricultural households are in crop production.

4.3.13 Ethnicity and Disability

The Kpelle (20.2%) and Bassa (13.6%) are the largest ethnic groups in Liberia and the two together constitute more than one-third of the total population. Dey is the smallest ethnic group in Liberia (see Figure 4.5). The proportion of persons with some form of disability (PWDs) is higher in rural areas than in urban areas.

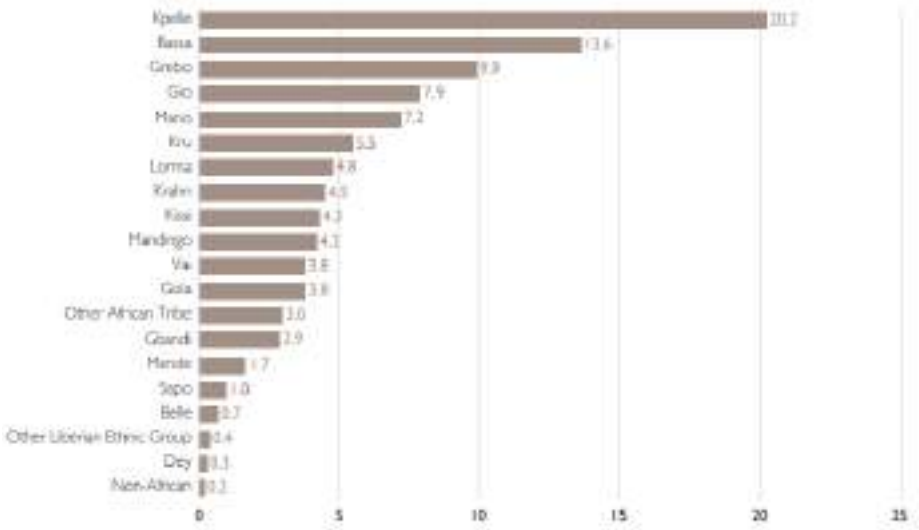

Figure 4. 5: Percentage Distribution of the Population by Ethnic Groups in Liberia

5.0 POTENTIAL ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS AND MITIGATION MEASURES

The Liberia project will comprise three (3) phases namely construction, operations and decommissioning phases. These will include pre-installation activities which comprise cable route geotechnical and geophysical surveys to investigate the most environmentally and socially sound and cost-effective route both in the marine and terrestrial environments. Within the marine terrain, cable installation will be carried out by ploughing into deeper marine sections while trenching options are likely to be used for shallower areas. The cable will be installed using a special built ship, which accurately places cables on or under the seabed along the route determined by the pre-installation survey. The marine fiber-optic cables will have a landfall on shore at the moisture and salt resistant cable landing station (CLS)[7], the point where the underwater cable comes ashore, transitioning from "wet" to "dry" infrastructure. From this facility that is constructed well above any storm surge limits, the cables connect to the land-based telecommunications network. The landing station will house specialized gear for powering and transmitting into a submarine cable and the repeaters. Once in place and connected, the cable system requires no major intervention. Critical activities during the operation phase will comprise occasional cable maintenance and repair in both marine and terrestrial spaces. As telecommunication cables and other ancillary facilities such as switching and transmitting equipment, terminal and network hardware, back-up power systems reach the end of their design life or become redundant due to technological advances, their removal or decommissioning from the seabed will be considered.
Construction, operational and decommissioning activities will result in potential E&S risks and impacts that will manifest as marine and terrestrial/aquatic habitat alteration/disruption, generation of hazardous materials and waste, EMF & RF, emissions to air, excessive use of energy, noise, labour risks, OHS risks, security, CHS risks, GBV/SEA, etc.).

The WARDIP-SOP2 Liberia project will create more opportunities in line with improved access and availability of internet connection. This notwithstanding, it is anticipated that potential environmental and social risks associated with implementation of activities under sub-component 2.2 will emerge. Based on the institutional and community engagement across the country, environmental and social risks and impacts could occur in two ways; potential impacts of prevailing baseline environmental conditions on the proposed projects; and potential environmental and social impacts of the proposed project on the baseline environmental and social conditions. The project will have immense positive environmental and socio–economic benefits through the connection of clients from various spheres of life and government arms that would benefit from improved communication. Fiber optic cables also play a significant role in enhancing energy efficiency in data centers. By reducing energy consumption and maintaining

[7] It is unclear if the project will be using the cable landing station as a cable termination station. A **cable termination station** will be the point at which the submarine cable connects into the land-based infrastructure or network. A cable termination station may be the same facility as the cable landing station or may be many miles away. The termination station will usually be the point where high-capacity 'backhaul' land-based network connects to areas of high demand, which are usually centres of high population density, rather than the usually remote locations of cable landing points/landing stations/termination stations.

high-quality data transmission over long distances, fiber optics help data centers optimize their operations.

5.1 Expected Positive Effects

The overall WARDIP-SOP2 Liberia Project impacts are anticipated to be mostly positive, significant and widespread. Offering high-speed, reliable connections with greater bandwidth, lower signal degradation over long distances, and improved security, fiber optic communications exhibit the following:

Positive environmental advantages

- ***Energy Efficiency***: The use of glass-based cables also makes fiber optics lighter, thinner, and more environmentally friendly than copper cables, leading to easier installation, reduced infrastructure costs, and a longer service life. With their higher data capacity, fewer fiber optic cables are needed to transmit the same amount of data as copper, leading to reduced overall energy consumption. Fiber optic cables are made from glass, an inert material, which is derived from sand, a more abundant and less resource-intensive material compared to the mining of copper. The carbon footprint is believed to be relatively low compared to most of the internet's infrastructure.
- ***OHS Concerns:*** Optical fibers do not transmit electricity, neither do they radiate signals and therefore cannot be tapped. Being immune to electromagnetic interference (EMI) and radio frequency interference (RFI), fiber optic cables ensure a more safe, stable and reliable connection. So, they may pose no threat to humans, especially workers.
- ***Electromagnetic Compatibility***: EMI/RFI from other telecommunication and ancillary equipment can cause data loss thereby increasing latency on packet streams as they traverse the network. Fiber optic cabling is resistant to many of the outside forces that degrade copper cabling. Unlike copper cables, fiber optic cables being dielectric and immune to EMI and RFI, it is anticipated that, in terms of EMI/RFI, they will pose no threat to marine organisms.

Positive social advantage

- **Increasing access to telecommunication systems does provide members of the workforce opportunities (time benefits) for carrying out child or elder-care responsibilities.**

Other key positive effects

- ***High-Speed data transmission***: Fiber optics provide significantly faster data transfer rates and higher bandwidth, supporting demanding applications like high-definition video streaming, online gaming, and videoconferencing.
- ***Lower signal loss (Attenuation)*:** Data signals in fiber optic cables degrade much less over long distances compared to copper cables, reducing the need for signal repeaters.
- ***Enhanced security:*** Because fiber optics transmit data using light pulses, they do not emit electrical signals that can be easily intercepted, making them more secure from eavesdropping.
- ***Cost efficiency:*** While the initial installation cost might be higher, fiber optic cables have a longer lifespan than copper cables, leading to lower lifetime installed costs.
- ***Physical advantages*:** Fiber optic cables are thinner and lighter than copper cables, making them easier and less expensive to install and manage within network infrastructure.

- ***Futureproofing*:** The high bandwidth and speed of fiber optic technology make networks more capable of supporting future technological advancements and evolving data demands.

Some key positive environment and social impacts associated with the projects include:

- ***Promotion of home-based work.*** This can reduce the need for travel, thereby minimizing the emission footprint. The use of ICT will reduce the need for movement of people from one location to another, which helps increase efficiency as potential time spent on movement is reduced. Virtual meetings will be enhanced because video/ teleconference will be possible. Additionally, the collection of examination results from schools will be digitalized because they can automatically be sent as a short message to a student's cellular phone. The same applies to document pick up because it can be emailed. All the above can reduce movement and minimize traffic-borne air and noise emissions.
- ***Enhanced education systems, including environmental training and the new job categories that come with it:*** new ways of learning, e.g., interactive multimedia and virtual reality, could mean schools would be able to undertake practical lessons in virtual laboratories or even share virtual laboratories with training institutions overseas. ICT also provides new job and working opportunities, e.g. flexible and mobile working, virtual offices and jobs in the communications industry.
- ***Dematerialization and reduction of resource needs in records storage***: This refers to replacing the physical production and distribution of music, video, books, software, etc., by delivering digital information over the network. Dematerialization reduces resource consumption and waste generation. Essentially, storage of records in electronic form will reduce paper needs and build space in all beneficial entities, mainly schools, hospitals and government agencies.
- ***Improved access to healthcare services through telemedicine:*** With ICT, a doctor in the Republic of Liberia would easily consult a specialist colleague overseas when executing a complex medical/surgical procedure.
- ***New tools, new opportunities:*** Another big effect of ICT is that it gives access to new tools that did not previously exist. A lot of these are tied to access to information. Still, there are many examples of stand-alone ICT systems, such as photography, where digital cameras, photo-editing software, and high-quality printers have enabled people to produce results that previously required a photographic studio. Additionally, ICT can be used to help different abled persons overcome disabilities. e.g. screen magnification or screen reading software enables partially sighted or blind people to work with ordinary text rather than Braille.
- ***The market for raw materials.*** Some of the construction materials will be sourced and procured locally and this will provide revenue for the local economy. Some of the materials that will be procured locally will include sand, bricks, poles and aggregate stones. The proceeds from the sale of raw materials to the construction activities at the proposed project sites will boost the local economy in the form of increased earnings
- ***Improvement in rural economy:*** Money earned by beneficiaries is expected to engender increased demand for goods and services. Increased demand is expected to increase production and, hence, improve the economy of rural and peri-urban areas where implementation occurs. In addition, improvement in accessibility to ICT and related facilities in the project communities is expected to facilitate the integration of economic and social activities.

- ***Access to information:*** The greatest effect of ICT on individuals is the huge increase in access to information and services that has accompanied the growth of the Internet. Some of the positive aspects of this increased access are better, and often cheaper, communications, such as phone and Instant Messaging. In addition, the use of ICT to access information has brought new opportunities for leisure and entertainment, making contacts and building relationships with people around the world, and the ability to undertake online transactions and obtain goods and services (e.g. online courses) from a wider range of suppliers outside Liberia without the use of middlemen. The anticipation is that WARDIP will generate the above-mentioned benefits.
- ***Increased digital literacy service delivery:*** The proposed project will enhance the capacity of ICT users to effectively engage in local and national development processes as well as in their becoming promoters of social accountability and innovative development solutions or applications.

5.2 Potential Negative Risks and Impacts

Underwater or submarine telecommunications cables (e.g., fiber optics) are the unseen backbone of the global internet that are laid on the seabed or seafloor and between land-based stations carrying the world's data, enabling near-instantaneous global interaction. The Liberia project involves construction of digital infrastructure, including submarine cable deployment, repeaters, beach manholes, landing stations, and terrestrial fiber extensions, as well as upgrades to data centers and the development of cloud-ready infrastructure. These works will present potential environmental and social impacts such as disturbance of marine and coastal/shore ecosystems, water quality degradation, biodiversity loss, generation of construction waste and e-waste, high energy consumption, and worker health and safety risks. On the social side, these infrastructure activities may affect livelihoods, particularly fishermen through temporary loss of access to fishing grounds and could involve minor land acquisition and associated economic disruption. Broader social risks may include labor influx, poor working conditions, occupational health and safety, and SEA/SH concerns, etc. Data-related interventions also raise concerns about privacy, misuse of personal data, and trust in digital transactions.

5.2.1 Pre-construction/Construction/Installation Phase

The process of laying undersea cables starts with thorough seabed surveys using acoustic instruments such as echo-sounders, multibeam or seabed mapping systems, commercial side-scan sonars and acoustic sub-bottom profilers to chart a route map in order to avoid natural hazards and minimize environmental and social impacts. Following this step, cable-laying ships equipped with giant spools of fiber-optic cable navigate the predetermined route. Various analyses (see OSPAR Commission, 2009; Carter et al.,)[8] have found that potential pressures and resultant impacts from underwater communication cable activities on marine biodiversity are generally local and minimal, although they could vary spatially and over the cable lifecycle. Vast evidence indicates that the primary impact of submarine cables is habitat disruption during pre-installation and construction. However, this disruption is typically small in scale, short-lived,

[8] OSPAR Commission. 2009. Assessment of environmental impacts of cables. https://qsr2010.ospar.org > media > assessments
Carter et al. 2014. The relationship between submarine cables and the marine environment. Published in 2014 by Brill Nijhoff. https://brill.com > abstract > book > edcoll

and has minimal long-term effects on marine biodiversity. Impacts resulting from the use of cable-laying vessels and a remotely operated underwater vehicle may include the following:

- **Terrestrial and Marine Habitat Alteration:** The ecophysiology and functionality of both marine and shore ecosystems may be altered during pre-construction, construction and installation phases of telecommunication infrastructure (fixed line cables, repeaters, beach manholes, landing stations, access roads to other types of fixed support infrastructure, etc.). The deployment of cable-laying vessels and remotely operated underwater vehicles during cable installation may lead to disruption to intertidal vegetation (e.g., coral reef and seagrass bed) and marine life, including marine mammals), and sedimentation resulting in turbidity (cloudiness) from disturbed sediment, and reduction in water quality and by extension disrupting fish breeding, food sources, and shelter, leading to reduced fish populations, altered species composition, and trophic cascades, reduced fishing activities and consequently affecting income and livelihood of fisher communities. These effects may be more pronounced when subsea cables are buried deep in the seabed (as a way to protect them) when they pass through shallow waters.
    - Installation of repeaters and connections to beach manholes and landing stations involves trenching and drilling, which can disturb soil, vegetation, and wildlife in the affected areas. Site excavation for terrestrial fiber optic installation, repeaters and beach manhole connection to the landing station can result in impacts including local habitat damage, alteration of local landscapes, vegetation disturbance, potential impacts on wildlife (from EMFs), and soil erosion.

- **Emission to Air, Noise and Vibration:** Within terrestrial environment, construction and installation activities (e.g., drilling and excavations) of repeaters and beach manhole connection to landing stations will produce dust, exhaust fumes from vehicles and equipment, and significant noise, which can negatively impact local air quality and create acoustic pollution for nearby communities.

- **Hazardous Materials and Waste:** Construction and installation activities (e.g., drilling and excavations) of fiber optic cables, repeaters and beach manhole connection to landing stations will produce construction-related waste, including solid waste and hazardous materials including construction dusts, silica, lead, isocyanates, solvents, cement, fuels, waste oils, mold, etc., that may contaminate sea, soil and terrestrial water.

- **Occupational Health and Safety Risks*:*** The construction activities (excavation, trenching, rehabilitation, and repair) underwater and onshore could expose workers to existing aboveground and underground utilities, including aerial or buried electric/power transmission lines. Impacts may include injuries and fatalities, etc.

- **Labor Influx and Associated Risks:** Under this project, labor influx during communication facility construction and operation is expected to occur during implementation of onshore construction and operational activities. Though labor influx is anticipated to be on the low side, it can cause social issues like increased crime, prostitution, disease spread, and social tensions, alongside economic strain from price inflation and

competition for local resources and services. Environmental impacts include heightened demand for water and energy, increased waste, and potential pollution from unplanned worker settlements. These risks are intensified by weak local service capacity.

- **Community Livelihood Disruptions:** The proposed development, especially cable installation in marine and terrestrial systems may disrupt community livelihoods (e.g., fishing, seaweed farming, boating, diving) by impacting access to resources, causing environmental damage, and leading to displacement and loss of income. Negative impacts include loss of traditional livelihoods, food insecurity, health problems, and social and emotional distress, which can lead to long-term impoverishment. Especially, installing facilities (e.g., landing station, laying cables to network centers, etc.) onshore may cause some temporal community business disruptions through the need to temporarily remove their business premises such as shops, signposts, pavements, and temporal garage structures, possibly due to excavation works to pave the way for transmission lines underground as designed within the urban areas. Similarly, the project may cause temporary disruptions in rural areas on open markets where businesses are also done within road reserves.

- **Disturbance of Artisanal Fishing Traffic: T**he project will finance the installation (route survey, ploughing, excavation, trenching, etc.) and deployment of a new submarine cable. These activities will affect the movement of artisanal fishing boats as their operations are expected to be close to the shoreline.

5.2.2 Operational Phase

The impacts of the project during the operational phase will mainly come from operations of established data centers as presented below.

- **Artificial Substrates:** The presence of cables can create a hard surface for marine organisms to colonize, acting as an artificial reef on the seabed, leading to long-term changes in the marine habitat. This unintended habitat can influence benthic communities, though the overall ecological impact is considered weak or short-term in many cases, but there are uncertainties.
- **Emission to Air, Noise and Vibration.** These effects may be primarily associated with the operation of vehicle fleets, the use of backup generators, and the use of cooling or fire suppression systems at landing stations. Noise and vibration may generate unacceptable disturbance to the local communities where fiber optic cables are to be laid.
- **Excessive Energy Consumption for Cooling and Operations:** The data centers are expected to run around the clock, that means a huge amount of energy consumption for the operations of the machines and their cooling in the process. This is a major problem because it has strong potential to increase operational cost of the project if not well managed. As data centers get bigger, denser, and more power-hungry than ever, they will have an almost insatiable demand for more power. Also, surge in demand for AI and high-performance computing (HPC) workloads will accelerate these trends.
- **Increased Generation of Hazardous Materials and Waste**: The landing station will house certain types of switching and transmitting equipment and the data centers

will host a large number of power-feeding and supervision equipment such as end-of-life backup power batteries (typically lead-acid batteries) and diesel-fueled backup generators for electricity, computers, servers and other accessories that will become waste at the end of their lifespan; this waste will be a huge problem considering the expected volumes and difficulty in dealing with waste, especially e-waste in the country.

- **Occupational Health and Safety Risks:** Occupational health and safety risks in operating communication facilities include physical hazards like falls from height, electrical shock from contact with power lines during maintenance and repairs, and exposure to extreme weather; electromagnetic risks from radiation from transmitting antennas emitting radio waves and microwaves; chemical exposure in maintenance and manufacturing; and ergonomic risks from poor posture or prolonged computer use. Other risks include traffic and driving hazards when using ground transportation for maintenance and repair activities.
- **Labor Influx and Associated Risks:** There seems to be little likelihood that there will be any massive labor influx as most of the constructional and operational activities may demand professional and skilled labor who are unlikely to be found in the project and neighboring communities. Notwithstanding this, it may be speculated that even with a minor or modest labor influx of workers, environment, community and human security could be negatively affected. Risks may be manifested in (i) social conflict arising between the local community and the project workers; (ii) increased risk of illegal behavior, or behavior that violates social norms in the project area; (iii) increased burden on and competition for public service provision; (iv) increased risk of communicable diseases and burden on local health services; (v) gender-based violence; (vi) child labor and school dropout; (vii) local inflation of prices; (viii) increased pressure on accommodations and rents; (ix) increase in traffic and related accidents.
- **Community Health and Safety Risks/impacts**: Operation of underwater fiber optic cables and onshore communication facilities can result in unintended public health and safety risks and impacts on local communities, especially those located near the project. Types of risks likely to manifest under this project include the spread of diseases from workforces to surrounding communities, especially in project-related settings; exposure of communities to hazards like noise, dust, soil and water contamination; increased exposure to hazardous substances or waste such as waste oil, lead, cement, solvents and glues, etc.; and the risk of accidents from heavy machinery, drowning or structural failure of masts or towers.

5.2.3 Cumulative Impacts

While submarine cables typically have a minor E&S impact and footprint, it is important to consider their potential contribution to cumulative impacts in areas affected by other ongoing or proposed human activities. When combined with other stressors, risks such as habitat loss, water quality degradation, and resource competition may intensify. There may be growing activities from cables, fishing, aggregate extraction, offshore renewables, oil and gas development and other seafloor uses that could disrupt livelihoods of communities. For this project, cumulative impacts may occur when the submarine cable interacts with 1) Ongoing port operations in Buchanan (shipping, dredging, and industrial discharges), 2) Coastal settlements expanding into

fragile ecosystems, 3) Existing stressors such as coastal erosion, mangrove degradation, and overfishing, and 4) Planned infrastructure development projects, including road rehabilitation and energy expansion. Livelihood disruption may be as a result of (i) loss of resource access; (ii) physical and economic displacement due to involuntary resettlement as a result of land acquisition; (iii) environmental degradation due to construction-related pollution that may damage the environment, affecting the natural resources that communities depend on; (iv) economic disruption as local businesses may suffer from reduced customer access, decreased revenue due to noise and dust, and a general decline in economic activity during the project; (v) social & cultural disruption stemming from the combined effects of displacement and environmental changes that may lead to the erosion of social cohesion, cultural identity, and community well-being.

Negative impacts may manifest such as (a) impoverishment and food insecurity; (b) loss of income, increased dependency, and a reduced ability to secure food; (c) exposure to construction dust and noise, coupled with changes in water and food security, can negatively impact community health; (d) emotional and social distress within affected communities as a result of loss of livelihood, displacement, and cultural disruption.

5.3 Mitigation Measures

The potential environmental and social impacts that may be associated with the implementation of sub-component activities can be minimized by careful site planning and staging of construction activities, adopting proper management practices during operation and relying on effective environmental and social monitoring and training to support management decisions.

5.3.1 Pre-construction/Construction/Installation Phase

Measures to prevent and control impacts will include the following:

Terrestrial and Marine Habitat Alteration

- Locating and siting cable routes, and shore access, to avoid critical marine and shore habitats, such as coral reefs, seagrass beds and breeding grounds. In preventing and controlling impacts to terrestrial habitats, it is recommended to site fixed line infrastructure (e.g., fiber optic cable) and other types of linear infrastructure along rights-of-way, access roads, lines, and towers to avoid critical habitats through use of existing utility and transport corridors, whenever possible.
- Burying submarine cables when traversing sensitive intertidal habitats within marine ecosystems.
- To avoid avian collisions, the project shall endeavor to avoid construction activities such as laying of submarine cable, installation of beach ancillary facilities during fish and marine mammals breeding periods, calving periods, spawning seasons, and other sensitive seasons or times of day.
- Avoiding cumulative impact of towers by co-locating antennae on existing towers or other fixed structures.
- In the case of terrestrial habitats, regenerating disturbed areas with native plant species should be progressive.
- Monitoring cable laying path for presence of marine mammals.

Emission to Air, Noise and Vibration: Minimization of emissions shall be achieved by

- Implementing vehicle fleet and power generator emissions management strategies.
- Substitution in use of chlorofluorocarbons (CFCs) in cooling and fire-suppression systems.
- Use of noise suppressing shields and mufflers as well as the location of noise generating sources away from residential or other noise-sensitive receptors to meet the noise emission levels.

***Hazardous Materials and Waste*:** Management actions may include:

- Implementing fuel delivery procedures and spill prevention and control plans applicable to the delivery and storage of fuel for backup electric power systems, preferably providing secondary containment and overfill prevention for fuel storage tanks.
- Implementing procedures for the management of lead-acid batteries, including temporary storage, transport and final recycling by a licensed facility.
- Ensuring new support equipment does not contain polychlorinated biphenyls (PCBs) or ozone-depleting substances (ODSs).
- Purchasing electronic equipment that meets international phase out requirements for hazardous materials contents and implementing procedures for the management of waste from existing equipment.
- Considering the implementation of a take-back program for consumer equipment such as cellular phones and their batteries.

***Occupational Health and Safety Risks*:** To mitigate occupational health and safety (OHS) risks, the project will implement a hierarchy of controls by conducting thorough risk assessments: substituting the hazardous with less hazardous alternatives, wherever possible; providing comprehensive training on hazards and safe procedures; using engineering and administrative controls like ventilation and clear protocols; fostering a proactive safety culture; and using personal protective equipment (PPE) as a last resort. Regular safety audits, clear communication, accident reporting and management action execution, and the continuous monitoring of working conditions are also vital to ensure safety measures remain effective and to improve the overall OHS management system.

Labor Influx and Associated Risks: To curtail the negative impacts of labor influx, the project should implement a Labor Management Plan (LMP). This should include measures like creating temporary worker housing and medical facilities to reduce strain on local infrastructure, establishing clear worker codes of conduct with training on cultural awareness and disease prevention, maximizing local employment (wherever possible), establishing community grievance redressal mechanisms, and fostering ongoing communication between project managers and the host community.

***Community Livelihood Disruptions*:** Community livelihood disruptions may be managed by building their resilience by diversifying economic activities, providing vocational training, and establishing financial support systems like savings groups. Key strategies include promoting enterprise-focused agriculture, developing small-scale industries, and investing in service industries, alongside efforts to secure sustainable, decent employment and enhance social safety nets for vulnerable groups. Specific actions may include: (i) Involve communities in identifying

needs and developing solutions to ensure restoration efforts are relevant and effective; (ii) Define and implement livelihood restoration programs (LRPs) that focus on helping affected people regain or improve their economic standing through training, business development, and the creation of cooperatives. Other programs may often include economic empowerment, agricultural or livestock support, skill development in areas like tailoring or beautician courses, and adult education in financial planning; ; (iii) Promote/Support skills and business development by providing education, training, and support for the establishment of new business modules and income-generating activities; (iv) Support improvements in agriculture by providing extension services, inputs, and other resources to enhance food security and economic status; (v) Prioritize the use of local labor and resources to build local capacity and distribute project benefits within the community; and (vi) Continuously assess the effectiveness of restoration programs to make necessary adjustments and address emerging challenges.

Table 5.1 below summarizes anticipated key Environmental and Social Impacts, proposed mitigation measures and responsibilities associated with WARDIP-SOP2- Liberia.

Table 5. 1: Summary of Potential Project Risks/Impacts and Mitigation Measures

A. **Construction/Installation Phase - Installation of fiber optic cables and other on-land facilities**			
Increased susceptibility to soil erosion and landslides	• Site excavation for terrestrial fiber optic installation and construction of beach manhole connection to the landing station can result in soil erosion and landslides on steep slopes.	• Restrict vegetation stripping to project sites to minimize project footprint and soil erosion. • Avoid ground and vegetation stripping in steeply sloping areas to minimize soil erosion and the risk of landslips. • Use above ground/aerial pole to pole transmission in such prone areas.	Environmental and Social Specialist of the PIU (WARDIP- SOP2 Liberia), Project Coordinator and EPA officers.
Natural habitat alteration and disturbance of terrestrial and marine ecology	• Works on installing or laying submarine cables and other associated infrastructure in both marine and terrestrial habitats can disrupt biodiversity, destroy breeding and spawning grounds and, by extension, affect fishing activities, consequently affecting income and livelihood. • Subsea cables are relatively small and have little or no impact on marine ecology or marine species during operational activities. At depths of over 1,000m, the	• Careful route planning to avoid sensitive habitats, burying cables deep into seabed for protection, implementing cable redundancy and diversified routes. • Engaging with stakeholders like fishers to reduce damage from fishing gear. • In the case of facilities on land, use of rights-of-way, existing access roads, lines, towers, existing utility and transport corridors, whenever possible, to avoid traversing sensitive and critical habitats and avoiding cumulative impacts.	Environmental and Social Specialist of the PIU (WARDIP- SOP2 Liberia), Project Coordinator and EPA, NaFAA.

	cable will simply sit on the seabed. ● In shallower waters than 1,000m in water, the cable will be buried, wherever possible.	● Avoidance of construction activities during the breeding season and other sensitive seasons or times of day. ● Revegetating disturbed areas with native plant species. ● Towers should be sited to avoid critical habitats such as migration corridors, foraging corridors, nesting grounds, etc.).	
Impacts related to rehabilitation or construction/extensions of landing stations and other facilities onshore	● Some of the facilities identified to accommodate IT systems are newly constructed but may need minor rehabilitation or extensions. ● Rehabilitation works may cause diverse environmental (e.g., emissions, waste, etc.), occupational health and safety, and social impacts (e.g., physical & economic displacement, tension, etc.).	Environmental and Social Management Plans or Resettlement Plans (RPs) will be prepared and implemented.	Environmental and Social Specialist of the PIU (WARDIP- SOP2 Liberia), Project coordinators and contractors, Liberia Land Authority (LLA).
Noise and vibrations	● Noise and vibration during the construction phase may come from machinery used for trenching and excavation. Vibration from compacting trenches can crack walls of structures adjoining work sites.	● The Project should require contractors to use equipment and vehicles in good working order and well maintained. ● As much as possible, the construction activities will be restricted to daytime only when noise pollution is least	Environmental and Social Specialist of the PIU (WARDIP-Gambia) Project coordinators and contractors

		felt to avoid nuisance to the residents. ● Avoid idling of vehicles and machinery.	
Dust and air pollution	● On land, site clearance, raw material extractions and transport, and rehabilitation works may generate dust affecting workers and the immediate surrounding locality.	● Water should be spayed regularly-at least twice a day. ● Provide workers with masks when working in a dusty area. ● Trucks carrying construction materials such as sand, quarry dust, laterite etc., will be covered with tarpaulin or appropriate polythene material from or to the project site.	Environmental and Social Specialist of the PIU (WARDIP- SOP2 Liberia) and Project coordinator and contractors.
Water pollution	● During submarine cable installation, there could be spillage or leakage of oil and other hazardous chemicals to sea and shore, which could pollute the sea and coast landscape and affect marine and terrestrial life.	● To check run-off and siltation-related outcomes, prompt backfilling shall also be carried out. ● Routine monitoring should be done and detect oil leakage or other hazardous material into the sea and coastal areas.	Environmental and Social Specialist of the PIU (WARDIP- SOP2 Liberia) Team and Project coordinator, contractors, EPA– EIA working group, NaFAA.
Improper waste management	● Trenching for the terrestrial cable to the landing station will create stockpiles, which have the potential to affect free movement of people and vehicles in the streets and along roads.	● The contractor will prepare a site waste management plan. ● Trenching waste shall be used for backfilling. ● Waste management shall form part of the induction process for all project implementation teams. ● E-waste will be collected and stored at project sites before	Environmental and Social Specialist of the PIU (WARDIP- SOP2 Liberia), contractors and EPA

		transportation to an e-waste disposal site by a licensed e-waste facility. ● Waste bins should be provided for construction workers to avoid littering waste.	
Traffic related accidents and traffic interference	● The installation of terrestrial cables might cut across existing roads and will be done along existing roads. It affects existing traffic and could cause traffic jams and accidents.	● Employ safe traffic control measures, including temporary road signs and flag persons to warn road users (drivers and pedestrians) of dangerous conditions. ● Where road use is restricted, signage and alternatives should be provided to the public.	WARDIP-SOP2 Liberia Environment Health Safety and Social (EHSS) safeguards Team and contractors
Pollution of the marine environment due to hazardous product spills, effluent discharge, or waste disposal during the installation of the submarine cable	The laying and burial of the submarine cable will be done using specialized ships. Both their circulation and anchoring have the potential to spill fuels, oils and lubricants that may pollute marine habitats and ecosystems.	● Any vessels operating under the project will be licensed and operated in accordance with the government of Liberia's commitments under MARPOL. ● Ensure that the vessels and equipment to be used are in good condition and meet the quality requirements for this type of operation.	Environmental and Social Specialists of the PIU (WARDIP-SOP2 Liberia) and contractors
Labour influx	● Laying telecommunication cable underwater and operating IT services may warrant high level technical expertise and skills that may	● To curtail the negative impacts of labor influx, the project will implement a comprehensive	Environmental and Social Specialists of the PIU (WARDIP-SOP2 Liberia) and contractors

	not be found in surrounding communities. ● Even though a modest labor influx may be anticipated under the project, preexisting social risks in the local community can be exacerbated even by a modest influx of labor. Thus, one may speculate that migration of labor to the project area may be minimal. However, certain activities such as cable trenching, rehabilitation of infrastructure facilities (brick and mortar work) onshore can be carried out with unskilled labor. These could draw labor to the project area.	Labor Management Plan (LMP). ● This includes measures like creating temporary medical facilities to reduce strain on local infrastructure, establishing clear worker codes of conduct with training on cultural awareness and disease prevention, maximizing local employment, establishing community grievance redressal mechanisms inclusive of a specific process for GBV, and fostering ongoing communication between project managers and the host community.	
Social order disruption	● The influence of the workers earning better in comparison to the majority of the community members cannot be underestimated in causing gender-based conflicts, sexual exploitation and harassment among the host community, causing family breakdowns. ● There is also potential for increased drug and alcohol consumption, thus leading to	● The Contractor shall develop (i) Gender Based Violence (GBV) and Child Abuse/Exploitation (CAE) Codes of Conduct; and (ii) an Action Plan to mitigate and respond to GBV and CAE within the company and the community. ● The Code of Conduct will outline the responsibilities of: (i) the company to create a	Environmental and Social Specialist of the PIU (WARDIP- SOP2 Liberia) and Project coordinator and Department of Labor and contractors.

	higher chances of confrontations among the host community, thus disrupting their peace. ● The project's search and provision of job opportunities can be a source of promiscuity, family conflicts, Gender-Based Violence, including child abuse and abuse of labor laws by the contractor.	positive culture for its workplace and employees; (ii) managers to ensure that culture is implemented; and (iii) individuals to adhere to the principles of that culture and not to engage in GBV and/or CAE. ● All employees (including managers) will be required to attend training before commencing work to reinforce their understanding of HIV/AIDS, GBV and CAE. Subsequently, employees must attend a mandatory training course at least once a month for the duration of mobilization. Codes of Conduct for workers and employers will be prepared, signed and complied with.	
Occupational health and safety risks	Occupational health and safety issues in telecommunications projects primarily include exposure to charged wires, high voltages, explosive gases, etc. Workers may also be vulnerable to EMI/RFI, optical fiber safety, elevated and	***Electrical safety*** ● Prior to excavation works, all existing underground cable installations should be identified and marked.	MoPT and Contractor Safeguards team

	overhead work, fall protection, confined space entry, and motor vehicle safety. ***Electrical safety***: Excavation, construction and repair of subsea cables under WARDIP SOP-2 Liberia may result in workers' exposure to existing aboveground and underground utilities, including aerial or buried electric transmission lines. ***EMF and RFI:*** Workers may be exposed to higher EMFs than the general public because they may be working in the neighborhood of underground power cables. ***Optical fiber safety***: Workers involved in fiber optic cable installation or repair may be at risk of permanent eye damage due to exposure to laser light during cable connection and also to minute or microscopic glass fiber strands that penetrate human tissue. ***Elevated and overhead work***: The assembly of towers and antennae can pose a physical hazard to workers using lifts and elevated platforms and those located below due to the potential for falling objects.	● Deactivating and properly grounding live power distribution lines. ● Workers should not approach an exposed, energized or conductive part. ● Only allowing trained and certified workers to install, maintain and repair electrical equipment. ***EMF and RFI*** ● Develop and implement an EMF/RFI safety program (survey and identify exposure levels) ● Provide training to workers in the identification of occupational EMF/RFI levels and hazards. ● Establish and identify EMF/RFI safety zones to differentiate between work areas with expected elevated EMF levels compared to those acceptable to public exposure, limiting access to properly trained workers. ***Optical fiber safety*** ● Preparation and implementation of laser, light safety and fiber management procedures.	

	Fall protection: Workers may be exposed to occupational hazards when working at elevation during construction, maintenance, and operation activities. ***Motor vehicle safety***: Use of ground transportation for maintenance activities is commonplace.	• Properly disposing of all broken fiber cables and scraps. • Always using safety glasses with side shields to prevent glass fibers from contacting the eyes. • Using protective clothing. Wearing protective and disposable lab aprons to prevent fiber particles from adhering to one's clothing. • Ensuring work area is well ventilated to prevent airborne glass particles from being inhaled. • Thoroughly cleaning work area at the end of every shift. • Separate work and eating areas to avoid ingestion. • Switching off laser lights prior to work initiation. ***Elevated and overhead work*** • Barricade area around which elevated work is taking place. Except for areas secured by fencing, all active construction areas should be marked with high-visibility tape to reduce the risk of accidents involving pedestrians and vehicles.	

		• Hoisting and lifting equipment should be rated and maintained. • Train operators in the use of hoisting and lifting equipment. • Ladders should be used according to pre-established safety procedures. ***Fall protection*** • Use safety belts ***Motor vehicle safety*** • Prepare and implement motor vehicle safety programs to protect the safety of workers and the communities in which they operate. • Experienced drivers/operators should be employed to manage project vehicles /trucks /equipment. • All manual equipment such as a pickaxe, pick mattock, cutter mattock, etc. should be sturdy and firmly fixed.	
Community Livelihood Disruptions	• Implementation of subcomponent 2.2 activities especially the construction of beach manholes, landing stations and cable laying may cause some temporal community business disruptions through the need	• Where applicable, prepare and implement a resettlement plan (RP) as part of an ESMP. • Ensure project-affected persons are adequately compensated for physical and economic displacements and provided all necessary support	WARDIP-SOP2 Liberia Environment Health Safety and Social (EHSS) safeguards Team and contractors

	for temporary removal of their business premises such as kiosks, signposts, pavements, and temporal structures, possibly due to excavation works to pave the way for cable lines underground as designed within the urban areas. ● Similarly, the project may cause temporary disruptions in rural areas on open markets where businesses are also done within road reserves.	and assistance during displacement as per ESS5. Work should start only after full compensation of the PAP ● Undertake construction/rehabilitation activities on non-open market days after prior consultations with local authorities to avoid any envisaged impacts. ● Arrangements will be made to ensure the participation of business owners and representatives of the urban authorities during implementing hours to guarantee the security and safety of their businesses. ● Develop and roll out a GRM.	
Community health and safety risks/impacts	● Examples of community health and safety issues identified during the construction phase include exposure to construction vehicles and transport, and exposure to dust, noise and vibrations. ● Operational phase hazards include (i) structural and site access issues in the event of structural failure of masts or towers, and unauthorized access by community	● Awareness sessions and meetings with community leadership, including the elderly, women, and the disabled, shall be carried out along the route. Project Safeguard teams shall also be inducted in the best practices while dealing with communities and aspects of community health captured in a particular location. ***Structural and site access***	Environmental and Social Specialists of the PIU (WARDIP-SOP2 Liberia) and contractors

	members, (ii) aircraft navigation safety, (iii) driver safety and cellular phones. ● Antennae towers/masts, if located near an airport or known flight paths, can impact aircraft safety directly through collision or indirectly through radar interference. ● Open trenches during excavations pose a danger to the free movement of people, especially children and the elderly who could easily fall in them, leading to serious injuries, including fractures. ● The construction activities on-site could pose several community health and safety risks, including injuries, the spread of sexually transmitted diseases. ● Threat to community and human security could be negatively affected. Impacts may be manifested in gender-based violence, increased demand for sex work.	● Adopt design and installation of tower structures and components consistent with GIIP. ● Erect fences to deter trespassers for accessing the perimeters of the masts or towers. ● Equip masts or towers with anti-climbing devices to preclude unauthorized climbing. ***Aircraft navigation safety*** ● Avoid the siting of towers close to airports and outside of known flight path envelope. ● Consult with regulatory air traffic authorities prior to installation. ***Driver safety and cellular phones*** ● Undertake customer information campaigns to promote the safe use of cellular telephones. ● Excavations in busy community areas shall have to be immediately backfilled after the installation of ducts. Unfilled sections shall have to be barricaded off and watch personnel provided during non-active periods. Alternative	

		routes should be created for communities to still utilize their areas. ● To mitigate the risk of communal infections, the World Bank Technical note on public consultation and Stakeholder engagement when there are constraints on conducting public meetings shall be observed during the project construction period by inspecting all staffing quarters for workers for EHS compliance before and during the occupation, ensuring that all workers and the community are sensitized on these SOPs. ● Further, an emergency response system should be established with treatment facilities for safe evacuation and treatment of those suspected or tested positive for communal infection. ● All open trenches and excavated areas should be backfilled as soon as possible after cable laying and construction have been completed.	

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		• Construction workers should be provided with and forced to wear suitable Personal Protective Equipment (PPE), including hard hats, overalls, high-visibility vests, safety boots, earplugs, gloves, eye goggles, etc. Collective Protective Equipment will be used. • Clear signage should be used near project sites. • Awareness creation and training on health and safety will be integrated throughout the project cycle. • All project-related accidents and near-misses will be duly recorded, and all needed actions complied with. • The contractor will appoint a health and safety officer.	
Extreme climate events	• The activities of marine cable installation could lead to the following risks: exposure of workers to hazardous waste from sediment disturbance, bio-diversity destruction or disturbance (seagrasses and mangroves as well as marine and wetlands biodiversity)	• Hourly weather conditions reports should be available to avoid the effects of extreme weather conditions. • The cable will be routed to areas that are not common for fishing activities. • The operating personnel must also be qualified for the operations to be performed.	Environmental and Social Specialists of the PIU (WARDIP-SOP2 Liberia) and contractors

	● Disturbance of socioeconomic activities for the fisher folks and the tourism industry.	● The ESIAs and respective ESMPs related to this activity will determine the standards to be followed.	
B. Operational Phase			
Excessive energy consumption for cooling and operations	● The data centers are expected to run around the clock, that means a huge amount of energy consumption for the operations of the machines and their cooling in the process; this is a major problem because it has strong potential to increase carbon footprint and operational cost of the project if not well managed.	Facilities at data centers should implement energy efficiency measures. These include: ● like server virtualization and consolidation, ● improve cooling systems through hot/cold aisle containment and free cooling by improving ventilation systems, strategically laying out equipment, properly insulating server rooms, and creating streamlined airflows, ● utilize energy-efficient technologies and hardware, ● Identify and remove Zombie or comatose servers that are no longer utilized in data center operations but continue to remain powered and consume unnecessary amounts of energy, ● optimize airflow management to reduce fan speeds, ● incorporate renewable energy sources, both on-site and off-site to reduce operational	Environmental and Social Specialists of the PIU (WARDIP-SOP2 Liberia) and EPA

		cost and environmental footprint.	
Increased generation of hazardous materials, including e-waste	• Telecommunication processes do not normally require the use of significant amounts of hazardous materials. • The Liberia project intends to procure equipment, including a substantial amount of IT equipment (e.g. computers, servers), storage batteries and diesel-fueled backup generators for electricity for maintenance and operation of the system. The operation of backup generators and service vehicles may also result in the generation of used tyres, and waste oils and used filters. • Also, the project is expected to result in significantly increasing the circulation and purchase of smart devices (e.g., mobile phones). All this equipment when they have reached their end-of-life will constitute a pool of e-waste that needs to be safely disposed of.	• Put in place fuel delivery procedures and spill prevention and control plans. • Provide secondary containment and overfill prevention for fuel storage tanks. • Procuring electronic equipment that meets international phase out requirements for hazardous materials content. For instance, considering the implementation of a take-back program for consumer equipment such as cellular telephones and their batteries. • Establish a working agreement with a certified/licensed e-waste facility for e-waste collection, transport, recycling, and dismantling of generated e-waste under the project. • Carrying out sensitization campaigns among local authorities, Operators of electronic devices, repairs for E-Waste collection, and transport to the e-waste	WARDIP-SOP2 Liberia Environment Health Safety and Social (EHSS) safeguards Team, contractors and EPA officers.

		collection centers under establishment in all districts.	
Natural habitat alteration and disturbance of terrestrial and marine ecology	Subsea cables are relatively small and have little or no impact on marine ecology or marine species during operational activities. At depths of over 1,000m, the cable will simply sit on the seabed. Where the cable is in waters shallower than 1,000m, the cable will be buried wherever possible. During operation, whether or not the cable is buried, there will be little or no ecological impact on benthic biota, marine mammals or fish. ● During operation phase (maintenance and repairs of subsea and onshore transmission cables and onshore facilities, service support and supervision, etc.) there is expected to be little or no ecological impact on marine habitat, benthic biota, marine mammals or fish. ● On shore, erected towers and antennae could affect avian movement resulting in collisions.	● In the design and planning phase, identify the best possible alignment for the cable routes in compliance with the requirements of this ESMF. In addition to adherence to the planning and action requirements recommended under ESS6 and captured in ESIA and ESMP formulation whose results will need to be adopted and followed consistently. ● While no significant impact is expected, additional baseline information and detailed studies will be needed during the preparation of the site specific environmental and social impact assessment, to confirm that this is in fact the case. ● A full biodiversity survey will be prepared as part of technical feasibility studies prior to selection of route of cable and location of beach manholes and landing stations. ● Monitor cable laying path for presence of marine mammals.	WARDIP-SOP2 Liberia EHSS, contractors and EPA officers.

		• Avoiding undertaking routine maintenance and repairs during fish and marine mammal breeding periods, calving periods, and spawning seasons.	
Noise	• The running of backup electric power generators may cause noise nuisance to communities.	• Use noise suppression shields and mufflers. • Locate noise generating sources away from residential or other noise-sensitive receptors. • Undertake mandatory equipment and vehicle maintenance and servicing protocols. • Avoid idling of vehicles and other heavy machinery.	WARDIP-SOP2 Liberia EHSS, contractors and EPA officers.

6.0 ENVIRONMENTAL AND SOCIAL PROCEDURES FOR SUB-PROJECTS

Environmental and social procedures for sub-projects involve implementing a framework for Environmental and Social Management to identify, assess, manage, and monitor risks. Key steps include screening, conducting Environmental and Social Impact Assessments/Environmental and Social Management Plans (ESIAs/ESMPs), and developing and implementing mitigation measures, often supported by stakeholder engagement, monitoring, and reporting. Key procedures and components are:

- Screening: The process begins with an initial screening to categorize sub-projects based on their potential risks and impacts. This helps determine the necessary level of assessment and management.
- Impact Assessment: For sub-projects with significant risks, an ESIA is conducted to identify and analyse potential impacts. This is often done by independent consultants.
- Risk Mitigation: Once impacts are assessed, specific mitigation measures are developed to avoid or minimize adverse effects. Examples will include (i) construction contractor anticipating and addressing occupational health and safety risks for workers who will engage in seabed cable installation due to threat of drowning; and (ii) project implementing procedures for the management of lead acid batteries (used as back-up power system), including temporary storage, transport and final recycling by a licensed facility (accredited by EPA).
- Stakeholder Engagement: Meaningful engagement with affected communities and other stakeholders is crucial to identify concerns and build support.
    - Clear records of these engagements must be maintained.
    - Safety signage and barricades may be necessary to alert communities to risks.
- Monitoring and Reporting: Ongoing monitoring is required to ensure that mitigation measures are being implemented effectively.
    - Regular reports are submitted to the relevant authorities, detailing performance, stakeholder activities, and the functioning of grievance mechanisms.
- Grievance Mechanism: A system for receiving and addressing community complaints, including GBV/SEA issues.
- Institutional Responsibility: The risk management framework will define the roles and responsibilities of different institutions in implementing and monitoring the procedures.

Table 6. 1: Environmental and Social Management Requirements for Sub-Projects

Pre-Project Approval	Preparation of relevant E&S risk management documents	ESMF, RPF/RP, ESIA/ESMP, ESCP, SEP, LMP	MoPT/ Consultants, WB
1. Sub-project Identification,	A full biodiversity survey as part of technical studies.	An ESIA including a biodiversity management/monitoring	Environmental Specialist & Social

Design and Appraisal	In-house E&S screening of sub-projects, based on result of the studies.	plan (BMP) as well as a fine-scale map for endangered/threatened species (e.g., turtle) nesting sites including other habitats within at least 25 m depth.	Specialist Consultants
	Community/ key stakeholder engagements and sensitization	Sensitization reports (Community/ stakeholders).	E&S Specialist Consultants at the PIU
	Register subproject with EPA for environmental screening and clearance (for sub-projects meeting eligibility criteria for registration).	Copy of forwarding letter and EPA EIA screening Form 1 (Annex 1), including further documentation as required.	E&S Specialist Consultants at the PIU
	Clearance of prepared E&S instruments by the World Bank.	Screening report and prepared E&S instruments for WB review and clearance.	WB
	Obtain clearance and environmental permits for subprojects and all the associated environmental and social risk management specific instruments screened by EPA.	Copy of permit and environmental compliance schedule for subproject implementation.	E&S Specialist Consultants at the PIU
	Incorporate EPA screening and permit recommendations and E&S issues identified during In-house sub-project appraisal into subproject formulation and design and contracts.	Copy of contract specifications.	MoPT
	Undertake field validation/verification on any land acquisition and crop/livelihood displacement and compensation issues	Completed guidelines for validating communal lands, pictures of meetings, list of key concerns raised and signed list and addresses	E&S Specialist Consultants at the PIU

	identified during in-house screening.	of people consulted during validation.	
2. Sub-project Execution (ESMP Implementation)	Community/ key stakeholder engagements and sensitization.	Sensitization reports (Community/ stakeholders).	E&S Specialist Consultants at the PIU
	Undertake training of key project actors (National, Regional, and Community levels in the project's E&S requirements for subproject implementation). Train contractors/ supervisors on E&S requirements. Include E&S risk management issues on the agenda for community pre-commencement meetings.	Training reports/picture.	E&S Specialist Consultants at the PIU
	Put in measures for handling grievances/ complaints and accountability and widely publicize them. Make available hotlines for receipt of grievances and complaints. Constitute Community Grievance/ complaints committee and train them. Appoint and train Community Facilitators expected to be focal persons for community/ project level grievances.	Establish Single Window Citizens Engagement Service toll free hotline. Transparency and Establish Accountability Boards (TABs), Provide Community complaints notebooks, complaints files and records. GMP and SEP	E&S Specialist Consultants at the PIU
	Institute and publicize measures for handling community exposure to diseases (e.g., malaria, HIV/AIDS, and COVID-19).	Produce Education Flyers/ posters. SEP	E&S Specialist Consultants at the PIU
	Labor and Working Conditions	Site inspection reports/ pictures.	E&S Specialist Consultants at the

	Enforce the under-listed E&S mitigation measures. Provision of temporary latrines at environmentally acceptable locations. Provision of adequate potable water to the workforce. Ensure the availability of a well-stocked first aid kit.	LMP	PIU, Contractors' focal points
3. Post-Subproject Execution	Constitute Community Facility Management Teams and train them.	Training reports.	E&S Specialist Consultant at the PIU
	Prepare and implement Facility Management Plan.	Facility Management Plans	E&S Specialist Consultants at the PIU
	Maintenance of subproject.	Facility Management Plans	Safeguard team

6.1 Environment and Social Due-diligence Procedures for Subprojects

***Step 1. Subproject Identification*:** The E&S specialists at the PIU will be involved from the beginning of subproject planning and will ensure that information required for Environmental and Social screening is included in the subproject proposal. This will include but is not limited to the subproject location, components, sensitive areas, land ownership and land tenure in the project area, project size, etc.

Step 2. Subproject Site-Specific Screening: Using the Project Screening Checklist, E&S specialists assess the subproject to highlight potential risks and impacts, which may affect the project's schedule, scope, and budget. The checklist prompts consideration of all potential E&S impacts, ensuring appropriate mitigation and specialist support. The E&S specialists will prepare a screening report that should outline the potential risks and impacts of the subproject.

Step 3: Assigning the Appropriate Risk Classification: After reviewing the data from the environmental and social screening form, E&S Specialists at the PIU, in consultation with the World Bank's E&S Specialists, will classify subprojects based on their risk levels:

a. High: subprojects that can cause adverse negative impacts on the environment and local communities. High-risk subprojects will typically involve large-scale operations with the potential for wide-ranging and sometimes irreversible impacts. As such, they will require rigorous environmental and social impact assessments, continuous monitoring, and mitigation strategies to minimize or eliminate negative outcomes. High-risk subprojects when identified under the Liberia project will be excluded and not funded.
b. Substantial: Subprojects with significant impacts on the environment and local communities. These may have reversible impacts with a smaller footprint and require

more extensive assessment and management measures. Substantial E&S risks typically involve issues such as pollution during submarine cable laying, , temporary displacement of people, unsafe working conditions, or violations of land and labor rights. These risks require careful management, including impact assessments, mitigation strategies, and stakeholder engagement, to prevent or minimize adverse outcomes.

c. Moderate: Subprojects with limited, reversible risks that can be effectively addressed through good international practice, mitigation measures, and stakeholder engagement.
d. Low: Subprojects with minimal or no adverse risks or impacts.

Substantial risks may arise from activities that involve seabed ploughing, excavation and cable laying, or onshore construction and operation of cable landing stations. These interventions could lead to potential challenges, such as habitat alteration resulting in intertidal vegetation and marine life, including marine mammals, and sedimentation resulting in turbidity and water quality; increased generation of hazardous material and waste (pollution) resulting from use of certain types of switching and transmitting equipment that require back-up power systems (e.g., lead-acid batteries in combination with diesel-fueled back-up generators for electricity; construction-related waste from onshore infrastructure installation; traffic congestion and displacement of existing businesses (retail shops, etc.) during construction, restrictions to land use (e.g., fishing, seaweed farming, recreational opportunities such as boating, swimming diving), physical and economic displacement as a result of land acquisition for cable landing station and other network infrastructure. The scale and nature of these activities will determine the level of risk, necessitating appropriate environmental and social assessments, stakeholder consultations, and mitigation strategies to ensure the positive impacts of the project and the management of any associated risks.

Step 4: Determination of E&S Instruments Required: After classifying the risk levels, the E&S Specialists at the PIU, in consultation with the World Bank E&S Specialists, will recommend the following:

- High-risk subprojects will be excluded from the project scope and not be funded.
- Substantial-risk subprojects: A fit-for-purpose ESIA or ESMP will be required to adequately address the risk management requirements.
- Moderate-risk subprojects: An ESMP is required to assess and mitigate potential environmental and socio-economic impacts, providing detailed measures to address risks and identify opportunities for environmental enhancement. A risk management checklist may be useful for projects with minimal, well-known risks.
- Low-risk subprojects: No further assessment is needed, but the core social and environmental management principles, along with stakeholder engagement requirements, must still be followed.

Based on the screening of subprojects under the Environmental and Social Management Framework (ESMF) and other overarching instruments(see Step #7), the Borrower may be expected to prepare site-specific instruments as required. These may include:

a. Site-Specific Environmental and Social Impact Assessments (ESIAs) – Prepared for submarine cable installation, fiber network expansion, landing stations, and during implementation as needed for other subprojects with potential

environmental and social risks. These assessments will evaluate potential impacts and prescribe mitigation measures.

b. Site-Specific Environmental and Social Management Plans (ESMPs) – Prepared during implementation as needed; define detailed mitigation, monitoring, and management measures for identified impacts from specific subprojects.
c. Biodiversity Management Plans (BMPs) – Prepared during implementation as needed; provide measures to protect and manage sensitive ecosystems and biodiversity affected by project activities, including marine and coastal habitats.
d. Resettlement Plans (RPs) – Prepared during implementation for subprojects requiring land acquisition or causing livelihood impacts; detail compensation and livelihood restoration measures.
e. Security Management Plan (SMP) – Prepared during implementation if security hazards are identified; outlines measures to manage risks to workers and communities.

Step 5: Project Registration with EPA: Before preparing any site-specific E&S instrument, the PIU must first register the proposed subproject by submitting an Environmental Assessment Registration Form to the Liberia EPA, initiating formal engagement in the environmental permitting process. Following this, the PIU will collaborate with the EPA for a site visit to assess environmental and social factors, including location, technology, public concerns, and land use. Based on the field visit, the PIU will submit a Screening Report to the EPA, which will decide the level of environmental assessment required within specified days. Possible decisions include objection to the project, no objection with approval and environmental permit issuance, a request for a Preliminary Environmental Report (PER) if further assessment is needed, or a requirement for an Environmental Impact Statement (EIS) if significant adverse impacts are anticipated. If the World Bank requires an ESIA but the EPA requests a PER or provides a 'no objection,' the PIU must comply with the World Bank's ESIA requirements.

Step 6: Scoping and Preparation of Terms of Reference: If the project requires the preparation of an ESIA, the PIU through an independent consultant must undertake a scoping process to define the scope of the assessment and identify key issues that need to be addressed in the ESIA. The scoping phase will involve careful planning, stakeholder consultation, and the preparation of detailed Terms of Reference (TOR) for the ESIA. The TOR will outline the methodology, objectives, and areas of focus for the assessment, ensuring that all relevant environmental and social factors are considered and appropriately evaluated. This step is crucial for establishing the framework of the ESIA and ensuring that it effectively addresses potential risks and impacts. A scoping report is developed and submitted to the EPA for review and approval. The EPA provides feedback within specified days, and the PIU will proceed with further assessment if the report is accepted.

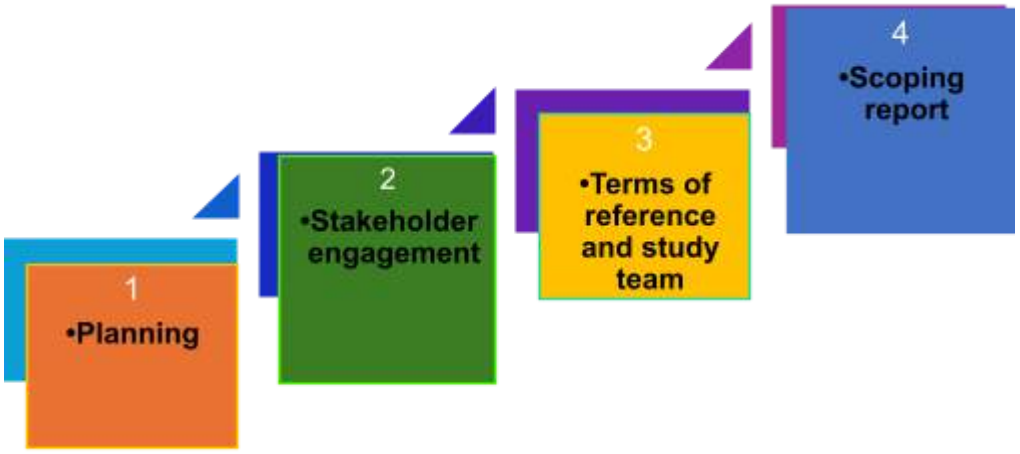


Figure 6. 1: ESIA Scoping Process

Step 7: Preparation of the Environmental and Social Assessment Instrument: The project will conduct the required ESA which will evaluate the potential direct and indirect risks and impacts of the subproject and propose mitigation measures to address the risks and impacts.

Risks Evaluation: It is important to follow a structured approach for analysing potential risks and impacts as part of the ESA process. The following steps may be considered:

a. **Risk Identification**: This step involves a systematic process to identify and assess potential risks related to the project across all relevant phases. The identification process should consider both project-specific factors and external influences that may affect the project. Potential risks should be analysed across the following phases: pre-construction, construction, operation, decommissioning, and post-decommissioning. For each phase, risks such as environmental impacts, social consequences, health and safety hazards, regulatory challenges, and uncertainties should be thoroughly evaluated. This approach ensures that all potential risks are identified early, enabling effective risk management strategies to be developed and integrated into the project's planning and implementation.

b. **Development of Likelihood and Severity Scales**: To standardise the risk assessment, Likelihood and Severity scales should be defined, each comprising weighted values. The Likelihood scale assigns values of 1 for "Not likely," 2 for "Somewhat likely," and 3 for "Very likely." Meanwhile, the Severity scale assigns values of 1 for "Low," 2 for "Medium," and 3 for "High."

c. **Risk Assessment**: Risks identified in the previous phase should be thoroughly assessed. Each risk is individually analysed, considering its likelihood and severity. As mentioned above, the Likelihood and Severity scales assign appropriate weights.

d. **Calculation of Weighted Scores**: Weighted scores for each risk are calculated by multiplying the Likelihood and Severity weights. This process aids in quantifying the relative significance of each risk.

e. **Classification of Risks**: Risks should be classified into distinct zones based on their total weighted scores to provide a clear overview of risk severity.

f. **Colour Coding**: A colour-coding system is employed to classify the risk zones for enhanced visual clarity.

g. **Presentation of the Risk Matrix**: The risk matrix is presented in a tabular format, with each risk positioned within the appropriate cell based on its likelihood and severity. The colour codes associated with each risk classification are indicated.

Table 6. 2: Likelihood and Severity Matrix

		Severity		
		Low (1)	**Medium (2)**	**High (3)**
Likelihood	**Not Likely (1)**	Low (1)	Low (2)	Moderate (3)
	Somewhat likely (2)	Low (2)	Moderate (4)	Substantial (6)
	Very likely (3)	Moderate (3)	Substantial (6)	High (9)

1. **Interpretation**: The risk matrix's interpretation is a crucial assessment component. It enables stakeholders to prioritise risk management efforts and allocate resources accordingly. The interpretations for the categories are shown in Table 10 below.
2. **Implications for Decision-Making**: The implications of the risk matrix are profound for project stakeholders, decision-makers, and implementing bodies:

- **Resource Allocation**: The risk matrix assists in allocating resources by directing attention and resources to where they are most needed. High-risk areas require a significant allocation of resources for immediate mitigation.
- **Timely Mitigation**: By identifying high and significant risks, the matrix ensures that mitigation measures are implemented promptly to minimise potential environmental and societal harm.
- **Continuous Monitoring**: Risks classified as moderate and low underscore the importance of continuous monitoring. This ongoing vigilance helps prevent risks from escalating and allows for early intervention if circumstances change.

Table 6. 3: Interpretation of Risk Classification

Risk Classification	Interpretation
Low Risk	The "Low Risk" category represents risks with low likelihood and severity, leading to a low total weighted score. These risks may not warrant immediate mitigation efforts, but they should still be monitored to remain manageable.
Moderate Risk	Risks classified as "Moderate Risk" have a moderate likelihood and severity, resulting in a moderate total weighted score. These risks should be systematically monitored to prevent their transformation into Substantial risks. While they may not necessitate immediate, intensive intervention, consistent attention is required to maintain their status.
Substantial Risk	"Substantial Risk" represents risks with moderate likelihood and/or severity, resulting in a moderate total weighted score. These risks require proactive management and continuous monitoring. Timely actions and preventive measures are essential to minimise their impact and prevent escalation into high-risk scenarios.
High Risk	Risks falling into the "High Risk" zone are characterised by a combination of high likelihood and high severity. These risks demand immediate and focused attention, as their potential impact on the project, environment, and society is

Risk Classification	Interpretation
	substantial. Urgent mitigation measures should be implemented to reduce the risk to an acceptable level.

- **Stakeholder Communication**: The risk matrix provides a clear and accessible means of communication with stakeholders, enabling them to understand the project's risk profile and the actions to manage those risks.
- **Compliance and Regulatory Requirements**: The risk matrix can assist in fulfilling compliance and regulatory requirements by demonstrating that the project has identified and is actively managing potential risks.

Development of Mitigation Measures: The ESA process should also include the development of comprehensive mitigation measures to address the potential risks and impacts. These measures should be designed to minimize, avoid, or offset negative environmental and social impacts that may arise during the project.

Step 8: Review of the Environmental and Social Assessment (ESA) Report: The PIU will submit the ESA report to both the World Bank and the EPA for review, following the established procedures of both organisations. All EPA public noticing and feedback procedures will be adhered to, with World Bank policies taking precedence over national regulations in case of discrepancies. The ESA report will be disclosed electronically on the websites of relevant ministries, agencies, and the World Bank, and hard copies will be made available at relevant locations such as ministries, agencies, metropolitan and municipal assemblies, and project sites.

Step 9: Approval of the ESA: When acceptable, the World Bank and EPA will approve the ESA. When the EPA approves the ESA, a permit will be issued.

Step 10: Public Consultations and Disclosure: Public consultations will be carried out during the screening process and in preparing the ESA. According to the procedures governing the ESA, public information and participation must be ensured during the scoping period and the preparation of the Environmental and Social Impact Assessment. Generally, the Liberia EIA Procedure requires the EPA to hold a public hearing as part of an Environmental Impact Statement review where:

- the expected environmental impacts are considered extensive and far-reaching;
- there is a great adverse public reaction to a proposal; and
- there will be relocation or dislocation of communities.

Step 11: Preparation of Bidding Documents: The contractor selection process will involve a multidisciplinary team, including E&S Specialists, to ensure that E&S requirements and contractual Clauses are incorporated into the bidding documents. The process begins with preparing a Request for Proposal (RFP), which is typically created by procurement staff with input from the project manager, technical specialists, E&S specialists, and lawyers. In some cases, a Request for Information (RFI), "expression of interest," or qualification questionnaire may be issued before the RFP to gauge market interest and gather preliminary information. An evaluation criterion will be developed alongside the bid packages, allowing prospective bidders to see the weightings of the environmental, social, and health and safety aspects of their

proposals early in the process. The E&S conditions should be included in the contract. The project should specify the E&S management plans and associated documentation that must be prepared and implemented by the contractor and require that these documents be submitted and approval within an agreed timeline relative to the project schedule, contractor mobilisation, and commencement of work.

Step 12: Contractor's Preparation of Bid: As part of the bidding process, contractors are required to provide details including (but not limited to) past Environmental, Health and Safety (EHS) performance; number and qualifications of ESHS personnel; E&S Management strategies and implementation plans (MSIP); Human Resource policies, codes of conduct, and grievance mechanism controls, including means to address harassment and other forms of Gender-based violence (GBV) plus prior, reported incidents of SEA and GBV; and supply chain management as criteria for inclusion on such lists. The number of documents, level of information, and details requested from contractors shall be commensurate to the scope of work and other specific features against which the contractor is being prequalified. A sample code of conduct to be followed by the contractor and individuals for Preventing GBV and Violence against Children (VAC) is given in Annexes 15 and 16.

Step 13: Preparation and Implementation of Contractor Environmental and Social Management Plan (C-ESMP) by Contractor: During the mobilisation stage, PIU should ensure that the contractor submits the C-ESMPs prior to the commencement of work. Provision of E&S personnel and resources allocated to the contract or service. The project will require appropriate resources and key E&S personnel to be appointed as part of the contract, throughout project implementation, or during the period in which their services are needed to manage and implement E&S requirements. It is recommended that conditions for replacing key personnel be acceptable to the project. The contract should have adequate ESHS personnel to implement the C-ESMP.

Step 14: Contractor Management, Oversight and Reporting: Through the bidding process, the PIU, through the supervision consultants, would ensure that contractors employ qualified E&S personnel to oversee E&S performance, and that contractor staffing and resources are commensurate with the magnitude and timing of work and potential E&S risks. The project would also approve documentation, including training programmes, to ensure all staff know E&S commitments and their part in meeting them. Through the supervision consultants, the E&S Specialists at the PIU will monitor contractor E&S performance and ensure the contractor monitors its and all subcontractors' E&S performance throughout construction, including mobilisation, the main construction phase, and demobilisation. Clear responsibilities and reporting lines are essential to avoid duplication of effort or, conversely, gaps in monitoring. If operations are carried out under contract or subcontractors perform some work, the client and contractor will also monitor E&S performance during operations. The project will require contractors to report their E&S performance and metrics at an agreed frequency (which shall include relevant information and data from subcontractors, as applicable). Timely reporting of E&S performance and results enables the client to identify opportunities for improvement, prevent poor performance issues, and assist contractors if remedial action is to be taken.

7.0 CHANCE FIND PROCEDURES

A chance-find procedure outlines the actions to be taken if previously unknown cultural heritage is encountered during a project. This includes cultural, archaeological, historical, and religious items or sites with significance, such as artefacts, structural remains, or human remains. The procedure ensures compliance with national regulations and World Bank Environmental and Social Standards (especially ESS8: Cultural Heritage), which emphasise the preservation of cultural heritage for future generations. The chance-find procedure provides guidelines for the project, contractors, and subcontractors in case of unexpected discoveries, following international best practices like the World Heritage Convention and Liberia's cultural resource protection policy. It applies to cultural heritage objects or sites identified during construction activities in the project area.

7.1 Chance Find Process

If any person discovers a physical and 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:

- Stop the construction activities in the area of the chance find;
- Notify the Resident Engineer, who in turn will notify the project and the responsible local authorities immediately (within 24 hours or less);
- Install temporary site protection measures (warning tape and stakes, avoidance signs), inform all Contractor personnel of the chance to find if access along the right-of-way or other work area is restricted and strictly enforce any no-go area needed to protect the site;
- Document the find through photography, notes, and maps (collect spatial data) as appropriate and prepare and maintain an initial Chance-find report (for all possible Chance Finds, cultural heritage or not); include spatial data for use in the cultural heritage database and GIS system;
- The Ministry of Tourism, National Museums and Monument Board and the responsible District Assemblies will protect and preserve the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; these include the aesthetic, historical, scientific or research, social and economic values;
- If the Authorities confirm the Chance-find is a cultural heritage, the project will initiate a consultation with communities and local authorities on mitigation measures and treatment procedures;
- The responsible authorities shall decide how to handle the findings. 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 a Chance-find is a verified cultural heritage site, the project shall prepare a final Chance-find report, including the required treatment plan;
- Implementation of the decision concerning the management of the finding shall be communicated in writing by the relevant local authorities;
- While the required treatment is ongoing, the project will coordinate with the contractor, sub-contractors, relevant district authorities, and local communities, informing them of the schedule and status of investigation treatment and when the construction may resume.
- Construction works could resume only after permission is granted from the responsible local authorities concerning the safeguarding of cultural resources;

7.2 Chance Find Documentation

The Ministry of Tourism, National Museums and Monument Board, and the Responsible District Assemblies, contractors and subcontractors' staff must maintain monitoring records, Chance Finds, and Chance-find response measures executed. These will include:

- Daily monitoring records indicating areas and activities monitored; reported Chance Finds and the results of any evaluations.
- Weekly reports summarizing reporting period activities, including Chance Finds, assessments and evaluations, internal and external communications and instructions and supporting photographic documentation (or other reference materials as appropriate). An additional report aimed at fulfilling any specific Ministry requirements is also anticipated.
- Monthly reports summarizing monitoring and evaluation results, the status of any site treatment measures required, instructions to the Contractor, and other internal and external communications. The authorities may require additional monthly reporting.

7.3 Cultural Heritage Training

All 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 procedures; that is, those actions that are required in the case of a suspected Chance Find. This training will be incorporated into the induction process for Company, Contractor, and Subcontractor personnel, including a quick reference hand-out. All employees must be aware of the Liberia Policy and WB ESS 8 related to cultural heritage, which makes it illegal and forbidden to disturb or remove cultural heritage objects offsite for personal gain. Disciplinary action will be taken against any personnel who violate this requirement.

7.4 Reporting and Communication

Chance-find monitoring, review, and reporting will form part of the project's ESIA/ESMP monitoring activities. Contractors and Subcontractors shall report all records on observational monitoring, protection measures, complaints, and damages to the Resident Engineer monthly and quarterly. The Resident Engineer shall report their supervision and the Contractor's records to PIU, which will inform relevant authorities on a case-to-case and quarterly basis.

7.5 Implementation Arrangement for Chance Find

Table 7.1 below presents the implementation arrangements and responsibilities of the Chance-Find procedures.

Table 7. 1: Implementation Arrangements and Responsibilities for Chance-find Procedures

PIU	- Provide overall coordination; - Lead consultation with relevant authorities and local communities; - Implement the treatment plan and provide the required funds; - Monitor the implementation of chance finds procedures; - Prepare required reports;	E&S specialists PIU Coordinator

Contractors and sub-contractors	- Stop the construction activities in the area of the chance find; - Install temporary site protection measures; - Inform the client and document chance finds;	Civil engineer/ Site foreman
The Ministry of Tourism, National Museums and Monument Board, Responsible District / Local authorities	- Conduct verification of chance find; - Approval of treatment measures in consultation with stakeholders; - Provide the authorization to resume works in the chance finds area;	In charge of Sports and Culture
Local communities	- To attend consultation meetings; - To provide the required information; - Participating in treatment measures	Local Population

8.0 RESETTLEMENT PLANNING AND IMPLEMENTATION PROCESS/RESETTLEMENT FRAMEWORK

8.1 Basic Principles for Resettlement Planning

To meet the requirements of ESS5 and following from the legal and policy frameworks discussed above, the resettlement principles adopted for the project will provide compensation at replacement cost, resettlement assistance to all project affected persons (loss of land, residences, business establishments and other such immovable properties), including the informal dwellers/squatters in the project footprint. The basic resettlement principles and guidelines include:

1) Involuntary resettlement would be avoided where possible and where displacement is unavoidable, it would be minimized by exploring all viable project options.
2) Persons affected by land acquisition and facing relocation or loss of incomes associated with change in land use due to the project would be given prompt and effective compensation that reflects current market realities so that they can improve or at least maintain their former standard of living.
3) The estimation of the compensation cost and/or benefit will be based on the Full Replacement method so that the cost of land and other properties taken and demolished are accounted for. This will ensure that the living standards of the project affected persons are maintained or improved above the pre-displacement level.
4) Resettlement of affected persons where needed (preparation of resettlement plan) will make provision for multiple options for resettlement (self-relocation or assisted relocation) of the affected residential structures, including informal dwellers/squatters.
5) Consult affected persons meaningfully and provide opportunities for them to participate in planning and implementing resettlement programs. Inform affected persons about their rights/options pertaining to land acquisition/resettlement.
6) Project Affected Persons would be given full information on the qualification (eligibility), mode of compensation, the restoring plan of production income, and the project's progress and be involved in the enforcement of resettlement arrangements (community participation).
7) Compensation and rehabilitation assistance will be paid before displacement. The land and/or property affected would be taken only when the PAPs are satisfied with the compensation arrangements. No civil works will be initiated unless compensation for land and assets and resettlement assistance is provided to all eligible PAPs.
8) The implementing agency and/or contractors would supervise the resettlement activities including the payment of compensation as well as monitoring and evaluation.
9) Appropriate grievance redress mechanism will be established at multiple levels to ensure speedy resolution of disputes, if any. The following principles will be followed: i) Simplicity: procedures in filing complaints are understandable to users and easy to recall; ii) Accessibility: filing complaints is easy through means that are commonly used by stakeholders, especially by the project-affected people; iii) Transparency: information about the system is made widely available to all stakeholders and the general public; Iv)

Timeliness: grievances are attended to and resolved in a timely manner; v) Fairness: feedback or complaints are validated thoroughly and subjects of complaints are given due process and opportunities for appeal; vi) Confidentiality: the identity of complainants remains confidential; vii) Provide multiple uptake points to build trust and confidence in the GRM. Complainants will be provided with multiple channels to submit their complaints; viii) Develop a simple system (possibly electronic based) for receiving, sorting, verifying, and tracking complaints for more effective management of grievances; and ix) Publicly disclose the complaints/grievance redress arrangements so that people are aware of where and how complaints will be managed.

10) All activities related to resettlement planning, implementation, and monitoring will ensure involvement of vulnerable groups (including elderly, women, female heads of household and people living with disabilities). Incorporate special measures and assistance for vulnerable groups.

8.2 Screening

- The Project will implement a detailed screening process to assess potential resettlement and land-related impacts in accordance with the Land Rights Act (2018) and World Bank ESS5 (See Annex 1B). The screening will help determine whether any proposed subprojects in Liberia will require land acquisition, cause displacement, or affect livelihoods, and whether a Resettlement Plan (RP) is required. Screening will include stakeholder consultation to determine informal land use that authorities and official documents may not provide.

- **Initial Information Collection:** The Project Implementation Unit (PIU) through the Environmental and Social (E&S) Specialists will collect baseline information on each subproject, including location, land tenure status, and land use patterns. Data will be sourced from the Liberia Land Authority (LLA), Liberia Ministry of Public Works, Ministry of Internal Affairs (MIA), and local authorities. Maps, cadastral records, and community land documentation (where customary ownership applies) will be reviewed to understand the potential footprint of project activities.

- **Identification of Potential Impacts:** The screening will determine whether the subproject requires land acquisition—public, private, or customary—and whether it will cause physical displacement (loss of shelter) or economic displacement (loss of income or livelihoods). Special attention will be given to vulnerable groups, including women, youth, elderly, persons with disabilities, and marginalized ethnic groups.

- **Field Verification:** The project team, in collaboration with the County and District Development Committees, will undertake field visits to verify the information collected. These visits will include direct consultations with clan and town chiefs, women's groups, youth associations, and affected persons. Field verification will confirm potential resettlement risks and allow community input early in the process.

- **Screening Checklist:** A standardized screening checklist (Annex 1) will be applied to document potential social and environmental risks. The checklist will be used by the E&S team to identify:
  - ✔ Type and magnitude of displacement (if any)
  - ✔ Nature of assets affected (land, crops, structures)
  - ✔ Impact on livelihoods and access to services

- ✔ Vulnerable households requiring targeted support
- ✔ Community concerns related to land or property

8.3 Subproject Category Classification

Based on the screening results, subprojects will be classified according to their resettlement impacts to determine the level of planning and documentation required (Table 8.1):

Table 8. 1: Classification of Subprojects Based on Resettlement Impact and Required Planning Instruments

Significant Impact	Subprojects involving major physical or economic displacement (e.g., relocation of communities, loss of farmland, or substantial livelihood disruption).	A full Resettlement Plan (RP) will be prepared, including census, asset inventory, compensation framework, livelihood restoration, monitoring, and grievance redress measures. Under the Liberia project, any such project will be excluded and not funded.
Non-Significant Impact	Subprojects with minor or localized resettlement impacts (e.g., small land take, minor livelihood impacts).	An Abbreviated RP (ARP) will be prepared, focusing on impact description, compensation, and livelihood restoration.
No Impact	Subprojects that do not cause displacement or affect assets or livelihoods.	No RP required; a Due Diligence Report (DDR) will confirm no resettlement impacts.

8.4 Establishing Cut-off Date

The cut-off date will be the date of the completion of the census and asset survey, as publicly announced during community consultations. Only Project-Affected Persons (PAPs) identified before this date will be eligible for compensation and assistance.

Communication and Notification: The PIU, working with County and District Commissioners, Community Chiefs, and the MIA, will widely disseminate the cut-off date through:

- Community meetings
- Local radio announcements
- Public postings at town halls and local government offices

After the cut-off date, no new claims will be considered, except under exceptional circumstances (e.g., absence during census due to illness or displacement by conflict). These exceptions will be reviewed through the Grievance Redress Mechanism (GRM).

8.5 RP Preparation and Validation

Socioeconomic and Census Surveys: The PIU will conduct detailed socioeconomic and census surveys of PAPs. These will include household demographics, sources of income, tenure status, and vulnerability indicators.

Impact Assessment and Asset Inventory: The project will assess the nature and magnitude of land, structure, crop, and livelihood losses. Assets will be inventoried with participation from the

Liberia Land Authority (LLA), Ministry of Public Works, Ministry of Agriculture (MoA), and local landowners.

Gender and Social Inclusion: The RP will incorporate gender-sensitive measures to ensure women, youth, and vulnerable groups benefit equitably from compensation and livelihood restoration. Female-headed households will be registered as direct recipients of compensation, and women will be represented in consultation and monitoring processes.

Stakeholder Consultation: The PIU will conduct meaningful consultations with affected persons, traditional leaders, CSOs, and local authorities throughout the RP preparation process. Meetings will ensure that PAPs' preferences regarding compensation and resettlement options are fully reflected in the RP.

Valuation of Assets: Asset valuation will be conducted by certified valuers from the Liberia Land Authority (LLA) using replacement cost principles, without depreciation. Valuation will consider local market conditions and the prevailing prices for crops, buildings, and land.

Entitlement and Compensation Matrix: The RP will include an Entitlement Matrix detailing categories of PAPs and types of compensation. Compensation will be provided in cash or kind and verified through documentation in the presence of local leaders and witnesses (see Annex 5).

Implementation Arrangements and Budget: The RP will outline clear roles for the PIU, County Authorities, and traditional leaders, including timelines, staffing, and resources. A detailed resettlement budget will be prepared, ensuring adequate funds for compensation and assistance.

Monitoring and Grievance Redress: The RP will include a monitoring plan and link to the project's Grievance Redress Mechanism (GRM) to track complaints and resolutions.

8.6 Approval of RP

The Resettlement Plan will be reviewed by the Liberia Land Authority (LLA), Environmental Protection Agency (EPA), and the Project Steering Committee (PSC) for consistency with national laws. It will then be submitted to the World Bank for final review and approval in line with ESS5 requirements. Implementation can only commence after World Bank clearance and the payment of compensation to PAPs.

8.7 Disclosure and Notification

Following approval, the RP will be disclosed publicly in accordance with ESS10 and Liberia's transparency laws.

Copies will be made available:

- At County and District Offices,
- On the EPA and PIU websites, and
- Through community meetings in affected areas.

PAPs will receive individual notices of entitlements, compensation amounts, and payment procedures through official letters or meetings facilitated by the District Commissioners and Town Chiefs.

8.8 Implementation of the RP

The PIU, in collaboration with local government structures, LLA, and traditional authorities, will implement the RP. Key activities include:

- Disbursing compensation and resettlement assistance
- Providing livelihood restoration support (e.g., agricultural inputs, training, microenterprise support)
- Facilitating physical relocation where required
- Monitoring progress and resolving grievances promptly

Quarterly progress reports will be shared with the World Bank and relevant national agencies.

8.9 RP Completion Audit

Upon completion, an independent auditor (consultant or NGO) will conduct a Resettlement Completion Audit to confirm that all commitments have been fulfilled and that PAPs' living standards have been restored or improved.

The audit will:

- Verify compensation and livelihood restoration completion
- Assess compliance with Liberia's Land Rights Act, EPA standards, and ESS5
- Identify residual issues and recommend corrective measures

The final Completion Audit Report will be submitted to the PIU, LLA, and the World Bank. The resettlement process will be deemed complete only after all outstanding issues are resolved.

9.0 INCIDENT AND ACCIDENT REPORTING

In case of occurrence of an incident or accident related or having an impact on the Project which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers, the implementing agency shall:

- As soon as reasonably practicable, but no later than 48 hours after having been informed of the occurrence of such incident or accident, inform the Bank by any electronic means of its nature or circumstance and any effect or impact resulting or likely to result therefrom;
- As soon as reasonably practicable, but no later than twenty (20) days after such incident or accident, provide the Bank with a summary report that includes a description of the incident or accident and the measures, if any, that the Borrower is taking or plans to take to address it and to prevent any future similar event; and
- Keep the Bank informed of the ongoing implementation of the measures and plans.

The PIU will ensure that:

- Accidents and grievance logbooks are placed on all construction sites;
- The supervision consultants' monthly progress report provides details on accidents;
- All regular progress reports to the Bank include information on accidents and incidents;
- Any severe injury (requiring off-site medical care) or fatality incident is reported to the Bank within 24 hours with basic information, and a detailed incident report is submitted within 10 working days. The incident report will cover the following:
    a. root cause analysis and
    b. corrective action plan on
        i. immediate mitigation measures in case of continuing danger (e.g., fencing, signboard, guards)
        ii. compensation to the affected family based on a clear rationale;
        iii. risk assessment and correct application of ESHS management procedures, and
        iv. medium- and long-term mitigation measures, including enhancement of safety measures, audits, and additional training.

10.0 GRIEVANCE MECHANISM

10.1 Objectives of Project Grievance Mechanism (GM)

The objective of the GM is to address and resolve project-related grievances or complaints from stakeholders and affected persons promptly, fairly, and in a manner that is, to the extent possible, acceptable to all parties throughout the project life cycle. Every effort will be made to:

i. Provide stakeholders and affected people with avenues for making a complaint or resolving any dispute that may arise during the implementation of the project.
ii. Ensure that complaints from aggrieved stakeholders are channelled to the project managers or appropriate designated entities to resolve disputes arising from project implementation.
iii. Ensure that appropriate and mutually acceptable redress actions are identified and implemented to the satisfaction of complainants and maintain a dialogue with them to the extent possible.
iv. Respond promptly and with sensitivity to the needs of complainants.
v. Seek solutions to tensions and conflicts early in the implementation process to avoid delays in potential relocation exercises.
vi. Ensure that claimants are satisfied with the outcome of the corrective actions and maintain a dialogue with them to the extent possible.

10.2 Guiding Principles

The following principles will guide the project's GM:

a. **Legitimate:** have a clear, transparent, and sufficiently independent process to ensure that no party to a grievance process can interfere with the fair conduct of that process.
b. **Accessible:** publicise to those who may wish to access it and provide adequate assistance for aggrieved parties who may face barriers to access, including language, literacy, awareness, finance, distance, or fear of reprisal.
c. **Predictable:** have a clear and known procedure, with time frames for each stage; clarity on the types of process and the outcome it can (and cannot) offer; and means of monitoring the implementation of any outcome.
d. **Equitable:** ensure that aggrieved parties have reasonable access to sources of information, advice, and expertise necessary to engage in a grievance process on fair and equitable terms.
e. **Rights-compatible:** ensure that its outcomes and remedies meet internationally recognised human rights standards.
f. **Transparent:** provide sufficient transparency of process and outcome to meet the public interest concerns at stake and will presume transparency wherever possible. The mechanisms will be transparent about receiving complaints and the key elements of their outcomes.
g. **Fairness:** all complainants will be treated with courtesy, equally and always. All complaints will be treated seriously, whether made by telephone, by letter, by e-mail mail or any other mode of lodgement. No complainant will be treated less favourably than anyone else because of their gender, social and marital status, or age, residence status or location, economic status, colour, race, ethnic or nationality origin, religious or political beliefs or affiliation, institutional affiliation or any other characteristics.

10.3 Elements of the GM

The GM will include several elements comprising the following:

a. **Publicly disclosed and easily accessible**. The GM will be publicly disclosed to ensure that stakeholders are informed about where and how to file complaints, as well as the procedures in place for managing and addressing these complaints. This transparency

helps to foster accountability and provides a clear process for stakeholders to voice concerns and seek resolutions in a timely and effective manner.

b. **A transparent grievance receipt and registration system**. The project will implement a transparent grievance receipt and registration system that allows project beneficiaries, project-affected persons, community members, and other stakeholders to register complaints through various channels, including a toll-free phone line, letters, walk-ins, email, website submissions, and meetings. Upon receiving a complaint, the project will confirm its receipt to ensure transparency and accountability. For further details, please refer to Annex 5&6, which includes a sample of the Grievance Mechanism (GM) complaint form.
c. **System for documenting, tracking and reporting**: A computer-based Grievance Management System to efficiently manage and resolve complaints by centralizing grievance data, automating submission and tracking, and categorizing complaints for prioritization. This will enhance transparency by allowing stakeholders to easily submit grievances and receive updates on their status and resolution. The system will also generate reports and analytics to identify recurring issues, helping to improve project management and risk mitigation. With secure access control, it ensures sensitive information is protected, while integration with other systems allows for a comprehensive approach to stakeholder engagement and project impact monitoring.
d. **Timely resolution at the lowest possible level**: The project will strive to attend to complaints in a timely manner and at the lowest level of operation to the extent practicable.
e. **Several choices for solving problems**: The GM will provide several choices for solving problems, ensuring that stakeholders have multiple pathways to resolve their grievances in a fair, transparent, and efficient manner. These options include:
    - Informal direct dialogue with affected parties, where grievances can be addressed through open discussions between the complainant and relevant project representatives.
    - Internal decision-making processes, where designated project officials handle grievances using documented standards and criteria to develop and propose appropriate responses. This process will also include an appeals mechanism to ensure fairness and accountability.
    - Joint problem-solving, in which the project and the complainant engage in direct dialogue to collaboratively identify and implement mutually acceptable solutions.
    - Third-party decision-making, where an independent entity intervenes to offer a resolution when a voluntary agreement between the parties is not possible.
    - By offering a range of solutions, GM ensures that stakeholders can select the most appropriate method based on the nature and complexity of their grievances. This flexibility fosters an inclusive, fair, and efficient process, allowing for grievances to be resolved in a manner that meets the needs and expectations of those involved.
f. **Grievance Follow-ups:** The GM will ensure that complainants have the opportunity to follow up on their grievances throughout the resolution process. Once a grievance is submitted, complainants will receive an acknowledgment confirming receipt, along with information on the next steps and estimated timelines for resolution. Regular updates will be provided to inform complainants of the status of their grievances, actions taken, and any required follow-up steps. Additionally, an appeals process will be in place, allowing complainants to escalate their concerns if they are unsatisfied with the initial response. This structured follow-up system will enhance transparency, accountability, and trust in the grievance resolution process.

10.4 Levels of the Grievance Mechanism

Table 10. 1: Levels of the Grievance Mechanism

Level 1: Community Level	Community Grievance Committee (CGC) comprising Town/Clan Chiefs, Community Development Committees (CDCs), Women's and Youth Representatives, and Project Community Focal Person.	• First point of contact for receiving complaints. • Builds on existing traditional and local dispute resolution systems (e.g., Town Chiefs, elders, women's and youth groups). • Grievance lodged verbally or in writing to Community Focal Person or Town Chief. • Recorded in Community Grievance Logbook and acknowledged within 3 working days. • The CGC reviews the issue, consults parties, and agrees on resolution within 7–10 working days. • If unresolved, complaint is referred to the District Level within 5 working days.
Level 2: District Level	District Grievance Committee (DGC) chaired by District Commissioner or Assistant Superintendent, including District Environmental Officer/EPA Representative, Project District Focal Point, Traditional/Religious Leaders, Women/Youth Representatives, and CSO Representative.	• Handles cases unresolved at the community level. • Utilizes existing District Administrative Structures under the Ministry of Internal Affairs. • Complaint acknowledged within 3 working days. • DGC investigates, conducts hearings and site visits (if necessary). • Resolution reached and recorded in the District Grievance Register. • If unresolved, complainant may appeal to the National Level within 10 working days.
Level 3: National Level	National Grievance Redress Committee (NGRC) under the Project Management Unit (PMU), with representation from relevant ministries (MIA, EPA, sector agencies) and National Steering Committee (NSC).	• Addresses complex, policy-level, or unresolved grievances. • Complaints may come directly from Districts or be submitted via project channels (website, hotline, email, physical submission). • Acknowledgment within 5 working days. • NGRC reviews documentation, conducts hearings, and may engage independent mediators. • Final resolution communicated to complainant and lower levels. • Unresolved grievances may proceed to formal judicial system under Liberian law.

10.4.1 Redress Through the Court

The existence of this GRM structure does not preclude aggrieved parties from resorting to the in-country judicial system (Courts) to resolve grievances directly or in the event they are not satisfied with the outcomes of the project Grievance Redress Mechanisms. A person dissatisfied with the outcome of the Grievances at the Community/Project level, PIU/Regional level or

National/Higher level could also resort to Alternative Dispute Resolution or go to Court to seek legal remedy.

10.5 Grievance Management Procedures

Figure 10.1 below depicts the general stages for the GRM.

Figure 10. 1: Stages of the Grievance Mechanism

Step 1: Receive and Register a Complaint

The project will enable aggrieved stakeholders ("complainants") to communicate their grievances through a variety of channels (e.g. Toll-free line phone, letter, walk-in, email, website, meeting, etc.), which will allow people to inform the project about concerns directly and, if necessary, anonymously or through third parties shown in Figure 10.2. Complaints will be written, ideally, but if received verbally, the project contact person will ensure written documentation is made and that the complaint is dated and recorded.

Figure 10. 2: Channels to submit complaints

The project will ensure that the procedures are effective, convenient, culturally appropriate, simple to understand, and easy to use. The grievance register will contain the information outlined in the Box 1 below. See Annex 12 for a sample of the Grievance Register.

Box 1: Grievance Register

The complaint register will include:

- Unique reference number,
- Date of the complaint,
- Name of the complainant/s (in case of non-anonymous enquiries and grievances)
- Gender,
- Location and address of the complainant/s,
- Content of the complaint
- Identification of parties responsible for the addressing and resolution of the issue;
- Dates when the investigation of the complaint was initiated and completed;
- Findings of the investigation
- Information on proposed corrective actions to be sent to the initiating party (unless it was anonymous) and the date of the response sent on measures of redress;
- Deadlines for internal actions required from Project's staff;
- Indication of whether a statement of satisfaction was received from the person who lodged the grievance, or a reason for non-resolution of the grievance
- The date of close-out; and
- Any outstanding actions for non-closed grievances

Step 2: Screening and Processing Complaints

The project will assign focal points at different levels for receiving and registering complaints from stakeholders and affected persons. The Environmental and Social Specialists for the project will have overall responsibility for tracking and following up on issues and complaints raised. They will serve as focal points at the national level. After receiving and registering the complaint, the focal points will establish the eligibility of the complaint received. The following criteria will be used to assess and verify eligibility:

- The complainant is identifiable and has provided a name and contact details.
- The complainant is affected by the project.
- The complaint has a direct relationship to the project. Does the complaint indicate that the programme has caused a negative economic, social, or environmental impact on the complainant or has the potential to cause such an impact? Does the complaint specify what kind of impact has occurred or may occur, and how the programme has caused or may cause that impact?
- The issues raised in the complaint fall within the scope of the issues that the GM is mandated to address.

Step 3: Establish Grievance Category

As a result of the screening (see Annex 13) for a sample of the Grievance Screening and Investigation Sheet), the grievance will be assigned to one of the four categories outlined in the Table 10.2 below.

Table 10. 2: Category of Grievance

Category 1	Complaints that are not related to the project	The project will confirm receipt and discuss with the complainant to understand the issue before responding. If it is confirmed that the complaint is not related to the project, the complainant will be referred to the appropriate project or institution.
Category 2	Queries, comments, and suggestions	The project will confirm receipt, and the relevant staff will assist in responding to the queries, comments and suggestions.

Category 3	Complaints and concerns which are not criminal or do not require the involvement of police	Complaints may be straightforward and can often be resolved on first contact. If this is not the case, then the complaint may require investigation. The investigation includes gathering documents, proof, and facts, as well as clarifying background information to verify the circumstances surrounding the grievance. It will involve coordinating with appropriate authorities, making decisions, proposing resolutions, and implementing agreed actions.
Category 4	Complaints and concerns that relate to cases of a criminal nature and will require investigation or intervention by the police or other law enforcement authorities, such as sexual abuse.	This will be escalated to the police without any delay. If grievances include more than one issue, the Grievance Officer will ensure that all issues are reviewed and addressed simultaneously to avoid any delays.

Step 4: Assess the Complaint

If the initial assessment establishes the eligibility of the complaint to be pursued, a further assessment will be undertaken to determine the complaint's seriousness. During the assessment, the project gathers information about the case, key issues, and concerns and helps determine whether and how the complaint might be resolved. The project will undertake the following:

1. Identify the parties involved.
2. Clarify issues and concerns raised by the complaint
3. Gather the views of other stakeholders, including those of the project
4. Measure/classify impact and urgency in high, medium, or low. Assessing the seriousness of a complaint is not easy, as it could be subject to biases. The seriousness of a complaint is linked to who in the project needs to know about it and whether senior management is advised. Criteria should be established and could include the following:
    - Severity of the problem,
    - Potential impact on the well-being and safety of an individual or group,
    - Potential impact on the project and
    - Public profile of the issue.
5. Determine initial options that parties have considered and explore various approaches for settlement.

Based on the risk-urgency combinations, a composite score will be produced (Figure 10.3). Composite scores are generated by cross-multiplying the individual risk and urgency scores.

Urgency (Ranking)		Risk (Ranking)		
		High (3)	Medium (2)	Low (1)
	High (3)	9	6	3
	Medium (2)	6	4	2

Figure 10. 3: Risk-Urgency Scores

A priority index will be developed based on the composite scores as follows:

1. Priority 1: Score 9
2. Priority 2: Score 6
3. Priority 3: Scores 3 and 4
4. Priority 4: Score 2
5. Priority 5: Score 1

Priority 1 is critical and accorded immediate attention as it will likely lead to loss of project funds, life, etc. On the other hand, priority 5 is not urgent, and the impact is low.

Step 5: Formulate a Response

Having completed the complaint assessment, a response will be formulated on how to proceed with the complaint. The response will be communicated to the complainant. The response will include the following elements:

- acceptance or rejection of the complaint;
- reasons for acceptance or rejection;
- next steps—where to forward the complaint;
- a time frame, and
- (if accepted) Further documents or evidence are required for investigation, e.g., field investigations.

The response will consider the complainants' views about the settlement process and provide a specific remedy. The response may suggest an approach for settling the issues or offer a preliminary settlement.

Step 6: Corrective Actions, Follow-Up, and Closing a Grievance

The complainant will be informed of the outcome if a grievance is resolved. Suppose a grievance is unresolved and escalated for consideration and resolution at another level. In that case, appropriate information will be provided to the complainant, including when the case will be passed to a higher level and when the outcome is expected.

The project will consider a closed grievance after an amicable resolution between the parties. In certain situations, however, the project may "close" a grievance under special circumstances, even if the complainant is unsatisfied with the outcome. Such situations, in which the project closes a grievance before a stakeholder is satisfied with the outcome, may arise if the complainant cannot substantiate the grievance or if there is an obvious speculative or fraudulent attempt. In such situations, all steps and efforts are taken to investigate the complaint before concluding. This information will be documented and communicated to the complainant without putting the lives of those who provided the information in danger.

It is, however, important to note that all project staff involved in handling grievances should not dismiss any grievance based on a hasty review and close off an investigation before the complainant has been notified and allowed to provide additional information. Consequently, a decision to close such grievances requires the endorsement of the project manager.

After the procedures, an internal report on each grievance, including recommendations, should be prepared and documented. Recommendations may be operational corrective actions or

improvements to existing policies or procedures. A corrective action plan should be developed and implemented where possible and appropriate.

Sub-contractors should present a report to the contractors on completing the agreed action and closing the grievance. Contractors should prepare and submit quarterly reports on complaint handling and resolution to the PIU.

The register of all complaints lodged into the project, third-party implementers / contractors / clients' Grievance Mechanism, as well as all information collected in the course of handling procedures, shall be duly filed and archived WARDIP-SOP2 Liberia project, third-party implementers/contractors/clients, ensuring restricted access and, where possible, deploying chain of custody measures.

Table 10. 3: Outline of Response Timelines

Notification of receipt	Within 2 business days of receipt of the complaint
Screening for admissibility and preliminary assessment	Within 5 business days of receipt of a complaint
Notification of action	Within 2 - 10 business days from receipt of the complaint depending on the type of complaint
Formulation of response	Within 3 - 20 business days of receipt of the complaint depending on the type of complaint

10.6 Grievance Channel for Gender-Based Violence, Sexual Exploitation and Abuse and Sexual Harassment

The project Grievance Mechanism (GM) will maintain strict protocols for handling Gender-Based Violence (GBV), Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH) complaints. Upon receiving such complaints, GM operators must protect confidentiality, document only essential details: the survivor's exact account, age, and any potential connection between the perpetrator and project activities and refer the matter promptly to the appropriate GBV committee/group. Survivors will be provided with clear, accessible information about the process, timelines, and available support, and retain full autonomy over participation and data sharing.

A specialist SEA/SH/GBV Safeguarding Team (SEA/SH/GBV ST) will be created within the GRM to manage these cases, ensuring survivor safety, privacy, and access to services. The project will ensure that multiple confidential channels exist for reporting, including anonymous options and third-party submissions. Grievance redress committees at the community level will receive training on sensitive engagement and secure referrals.

Complaints will be filed with written survivors' consent, and immediate referrals to support services will be made where necessary. The intake process will be survivor-centered, with all sensitive data stored securely and separately from other records. The GM focal point will verify service provision, classify the case, notify project social/GBV specialist within 24 hours, and strictly limit information sharing to protect identities. SEA/SH cases must be reported to World Bank immediately when it becomes known to the project.

The GM focal point must provide a formal acknowledgement of the SEAH grievance within three days of filing, depending on the initial delivery method. If the complaint was received via a service provider, all communication with the survivor may be managed through the provider.
The SEA/SH/GBV ST (constituting personnel trained in survivor-centered approaches and including the GBV Specialist at the PIU) will investigate within 10 days to examine the facts of each case and assesses incidents to: (1) establish any project linkage and (2) recommend proportionate disciplinary actions to the accused's employer. Final disciplinary decisions remain with employers, while legal determinations fall to judicial authorities. This process ensures accountability while respecting institutional boundaries and due process.

The Social/GBV Specialist will act to facilitate the survivor's access to this forum, and make appropriate referrals to GBV service providers, where needed.

Ongoing monitoring ensures confidentiality, informed consent, and proper service referrals. Survivors will be informed of outcomes within 14 days and can appeal decisions through an established committee. All data gathering prioritizes respondent safety, confidentiality, and informed consent, with special safeguards for children and vulnerable groups and rigorous standards for team training and support. Projects and Workers GM will be aligned with SEA/SH GM process to ensure SEA/SH case management is uniformly and comprehensively managed.

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

- Information gathering and documentation must be done in a manner that presents the least risk to respondents, is methodologically sound, and builds on current experience and good practice.
- In maintaining records, all details will be kept unidentifiable in individual cases, and the confidentiality and safety of GBV survivors will be protected above all. This means restricting access to case date and incidents' report in the data management system.
- The safety and security of all those involved in information gathering about SRGBV is of paramount concern and should be continuously monitored. The confidentiality of individuals who provide information about SRGBV mut be protected at all times.
- Anyone providing information about SRGBV must give informed consent before participating in the data gathering activity.
- All members of the data collection team must be carefully selected and receive relevant and sufficient specialized training and ongoing support.
- Additional safeguards must be put into place for children under 18 years, that are to be the subject of any direct incident information gathering, including mandatory presence of a trained professional adept at communicating with children safely and ethically.

For more details, please check project's Stakeholder Engagement Plan. The project will finalize and disclose SEA/SH action Plan three months after the project effective date to provide details on safeguards measures against SEA/SH risks.

10.7 Workers Grievance Mechanism

The project will require contractors to establish a workers' Grievance Redress Mechanism at the Site level with the contractor representative, the supervising firm representative, and the workers' representative as required by the Labour Management Procedures prepared for the Project. Workers will be informed about the grievance mechanism during meetings, induction, and training. The worker's grievance mechanism will include the following:

- A procedure to receive grievances such as a comment/complaint form, suggestion boxes, email, a telephone hotline;
- stipulated timeframes to respond to grievances;
- A register to record and track the timely resolution of grievances;
- A responsible department to receive, record and track the resolution of grievances.

The Supervision firm's safeguards staff will monitor the contractors' recording and resolution of grievances and report these to the project in their monthly progress reports. The PIU Social Specialist and the Project Manager will monitor the process.

10.8 World Bank's Grievance Redress Service

The Grievance Redress Service (GRS) allows individuals and communities to submit complaints directly to the World Bank if they believe that a World Bank-supported project has or is likely to have adverse effects on them, their community, or their environment. The GRS enhances the World Bank's responsiveness and accountability to project-affected communities by ensuring that grievances are promptly reviewed and addressed. Any individual or community who believes that a World Bank-financed project has, or is likely to, adversely affect them can submit a complaint.
The GRS considers a complaint admissible when it:

- The complaint relates to a World Bank-supported project that is under preparation, active, or has been closed for less than 15 months;
- the complaint is submitted by individuals or communities affected by a World Bank-supported project or by their authorised representative and
- the complainant(s) allege that they have been or will be affected by the World Bank-supported project.

Complaints must be in writing and addressed to the GRS. The following methods can send them:

- online, access the online form
- by emailing grievances@worldbank.org
- by letter or by hand delivery to the World Bank Headquarters in Washington D.C., United States or any World Bank Country Office

Information to include in a complaint must

- identify the project subject of the complaint
- clearly state the project's adverse impact(s)
- identify the individual(s) submitting the complaint
- specify if the complaint is submitted by a representative of the person(s) or community affected by the project
- if a representative submits the complaint, include the representative's name, signature, contact details, and written proof of authority.

Presentation/submission of supporting evidence is not necessary but may help review and resolve the complaint. The complaint may also include suggestions on how the individuals believe the complaint could be resolved. All complaints will be treated as confidential. The GRS will not disclose any personal data that may reveal the identity of complainants without their consent.

11.0 STAKEHOLDER CONSULTATIONS AND INFORMATION DISCLOSURE

Stakeholder and community engagements are a major component of the preparation of the proposed WARDIP-SOP2 Liberia project. It is a requirement for both the World Bank and national environmental and social policies and regulations. The consultation and engagement process focuses on providing information on the proposed project in a manner that can be understood and interpreted by the relevant audience, seeking comments on key issues and concerns, sourcing accurate information, identifying potential impacts and offering the opportunity for alternatives or objections to be raised by the potentially affected parties, non-governmental organizations, members of the public and other stakeholders. Consultation has also been found to develop a sense of stakeholder ownership of the project and the realization that their concerns are taken seriously, and that the issues they raise, if relevant, are addressed in the environment and social management process and will be considered during the project design refinement.

Public consultation and stakeholder engagement are the basis for building strong, constructive, and responsive relationships that are essential for successfully managing a project's environmental and social impacts. Stakeholder engagement is an ongoing process that involves the following elements: stakeholder analysis and planning, disclosure and dissemination of information, consultation and participation, grievance mechanism and ongoing reporting to relevant stakeholders.

Specifically, the objectives of stakeholder consultations are:

1. To prepare communities for potential emergency scenarios that could be caused by the project and can affect the community.
2. To build a trusting relationship with the affected communities and other interested stakeholders based on a transparent and timely supply of information and open dialogue.
3. To ensure effective engagement with local communities and other key stakeholders throughout all phases of the project.
4. To actively build and maintain productive working relationships based on principles of transparency, accountability, accuracy, trust, respect and mutual interests with affected communities and other stakeholders.
5. To collect input on impacts and mitigation design.
6. Community participation is vital in ensuring the success of any project. Communities to be targeted by the project may be among the most deprived in the country. This makes it more meaningful that they understand the project's various components to ensure successful implementation and reach maximum benefits.

Given that project affected people and communities are not yet identified, initial consultations were held with stakeholders at the central level and county level with representatives of the administration, the private sector, women, youth and vulnerable people. Further, consultations are recommended during the implementation of activities and the preparation of site-specific instruments.

11.1 Public and Stakeholder/Community Engagement and Consultations (refer to the SEP developed for WARDIP SOP2 Liberia Project, 2025)

Methodology for Preparation of the SEP

Diverse stakeholders were consulted during the development of SEP. The Ministry of Telecommunications and Post (MoPT) and the WB reviewed the engagement tools, such as questionnaires and interview guides, including for the E&S Assessment and Feasibility study guiding design consideration for WARDIP-2.

The E&S Assessment and Feasibility study methodology began with a planning phase, during which the study team developed a work plan outlining the sequence of activities, responsibilities, and timelines. This plan was structured to ensure compliance with the requirements of the Environmental Protection Agency (EPA) of Liberia, as well as relevant guidelines from the World Bank's Environmental and Social Framework (ESF) and the International Finance Corporation (IFC) Performance Standards. During this stage, Terms of Reference (TOR) for the firm conducting the study were reviewed and refined, ensuring that the scope of the study covered both environmental and social aspects comprehensively.

Desk Review and Secondary Data Collection

The desk-based research phase involved gathering and analyzing secondary information from multiple sources. Relevant documents included national legislation, environmental policies, strategic development plans, marine biodiversity studies, climate records, and socio-economic surveys. International references such as the United Nations Convention on the Law of the Sea (UNCLOS) and submarine cable installation guidelines from the International Cable Protection Committee (ICPC) were also consulted.

Data sources included government ministries (e.g., Ministry of Posts and Telecommunications, Ministry of Public Works), the Liberia Maritime Authority, the Environmental Protection Agency, Federal Development Authority, National Fisheries and Aquaculture Authority and local government offices in Grand Bassa County. Scientific journals, regional studies on West African marine environments, and prior environmental assessments for similar infrastructure projects were also reviewed. This background research helped establish the environmental and social baseline before field surveys began.

Field Surveys – Environmental Baseline

Field surveys were conducted to collect site-specific data on the physical, biological, and ecological conditions in the project area.
These surveys covered both onshore and offshore environments:

- **Onshore Surveys:**
  The E&S Assessment team assessed the proposed landing site and surrounding areas for coastal morphology, vegetation types, soil conditions, and any signs of erosion or habitat degradation. Photographic documentation and GPS mapping were carried out to create accurate records of site conditions. Special attention was paid to mangrove stands, beach dynamics, and human activities in the area, such as fishing, boat launching, and small-scale commerce.

  An important part of the planning stage was the selection of the study area. This involved identifying the proposed cable landing site at Big Fanti Town in Buchanan and mapping the offshore route toward deep water. Geographic Information System (GIS) data,

satellite imagery, and nautical charts were reviewed to understand physical conditions, land use patterns, and potential environmental sensitivities. These preliminary observations informed the design of the fieldwork program.

Offshore Surveys:
Marine specialists carried out nearshore and offshore observations, including seabed profiling and habitat identification. These surveys aimed to detect the presence of seagrass beds, coral patches, or areas of high fish density that might require avoidance or mitigation measures. Water quality parameters: such as temperature, salinity, pH, and turbidity—were measured using handheld instruments, while marine biodiversity observations were made using snorkeling and small-boat transects in shallow waters.

Socio-Economic and Cultural Assessment
Recognizing that the project will influence local communities, a dedicated socio-economic assessment was undertaken. This involved direct engagement with community members Participants included artisanal fishers, boat owners, women's cooperatives, youth groups, local business operators, and representatives from traditional leadership structures.

The assessment gathered information on livelihoods, household income sources, reliance on coastal and marine resources, cultural practices linked to the sea, and existing infrastructure such as schools, clinics, and markets. It also explored community concerns about potential disruptions during cable installation, as well as expectations for potential benefits like jobs, improved connectivity, and economic opportunities.

Stakeholders were identified and characterised according to their statutory functions, responsibilities, and mandates within the ICT sector as well as potential impact of the project. The organisations encompass a variety of stakeholder categories, including potential project communities, government institutions, regulators, non-governmental organisations (NGOs) and civil society organisations (CSOs), associations, the private sector, media, and development partners (see Annex 1 for list of stakeholders engaged directly).

To gather data on the characteristics, knowledge, and perceptions of stakeholders, including communities, associations, regulators, government agencies, civil society organisations, and development partners, structured questionnaires and interview protocols were employed (see Annex 2 for tools used), along with field observations. The areas in which data were collected included background information such as relevant national and local laws and project documents, was reviewed to obtain secondary data. The document evaluation helped identify critical stakeholders for the WARDIP-SOP2 and potential data gaps. Information from secondary sources included regulations, environmental and social (E&S) requirements, and the prerequisites to initiate the WARDIP-SOP2.

Stakeholder engagement was an integral part of the methodology, ensuring transparency and building trust. Meetings were organized with national agencies, local authorities, and community-based organizations. The purpose of these engagements was to share information about the project, clarify its potential impacts, and gather input for designing appropriate mitigation measures.
Engagement techniques included public meetings, targeted consultations with interest groups, and key informant interviews. Visual aids such as maps, diagrams, and photographs were used to

make technical concepts more understandable to non-specialist audiences. Attendance registers and meeting minutes were kept for all sessions, forming part of the documentation for the study.

The Consultant assisting with the preparation of the SEP examined different iteration of the Project Appraisal Document (PAD), the Preliminary Environmental and Social Assessment report for the Submarine Cable in Liberia, along with the WB's policies, regulations, and E&S Framework, to identify potential E&S issues related to the project.

Stakeholder Identification

Stakeholder identification was carried out to determine the project stakeholders, their key groupings and sub-groupings, as well as their needs and expectations regarding engagement with the project. Stakeholders were also mapped according to their roles, level of influence, and degree of potential impact from the project.

At the national level, institutions such as the Environmental Protection Agency (EPA), the Liberia Telecommunications Authority (LTA), the National Fisheries and Aquaculture Authority (NaFAA), the Ministry of Mines and Energy, and the Ministry of Transport were engaged because of their regulatory and oversight responsibilities.

County and local authorities, including district commissioners, municipal officials, and traditional leaders, were consulted to ensure local-level governance structures were informed and actively involved. At the community level, engagement was extended to town chiefs, fishermen cooperatives, women's market groups, and youth associations, who represent the primary resource users in the affected area.

The mapping that was carried out established the following key groups:

- Project-affected parties include individuals, communities, and entities within the Project Area of Influence who may experience direct effects, whether actual or potential, from project activities. The active participation of these stakeholders is crucial for identifying impacts, assessing significance, and developing mitigation strategies. Their close involvement will ensure that project decisions reflect local realities and needs. Details of group will be found in Table 3.1 of the SEP Report of 2025.
- Other Interested Parties. This group consists of individuals, organisations, and institutions (Government Ministries, Departments & Agencies (MDAs), utility service providers, local government authorities, local transport operators, contractors and sub-contractors, suppliers, workers of all categories, research and educational/academic institutions, healthcare facilities, Development Partners & International Organizations, private sector & industry players, Civil Society & Community Stakeholders, Regional & Cross-Border Entities (ECOWAS, Mano River Union (MRU), that, although not directly impacted, perceive their interests as affected by the project or have the capacity to influence its implementation. The participation of this group enriches project planning through diverse perspectives. Refer to Table 3.2 of the SEP Report of 2025.
- Disadvantaged and Vulnerable Groups. Special attention was paid to vulnerable groups, including women, elderly residents, and low-income households, who are often underrepresented in decision-making processes but may face unique risks or barriers to accessing project benefits. Some project impacts are expected to disproportionately affect poor or vulnerable individuals or groups, details of which can be found in the E&S Assessment and project Feasibility study undertaken by TACTIC. These necessitate specific engagement measures to ensure their equitable involvement in the project's

consultation and decision-making process, as well as mitigating some of the unavoidable and/or cumulative negative impacts. Some major concerns around these groups what could garner interest in the project are provided in Table 3.3 in the 2025 SEP Report for this Project.

- Civil society organizations, academic institutions, and environmental researchers were included to capture independent perspectives, while private sector stakeholders such as telecommunications companies, internet service providers, and port and maritime authorities were also consulted due to their operational interest in the project. This group may include local authorities, advocacy organisations, or nearby communities whose participation enriches project planning through diverse perspectives. Potential interested parties include, among others, those mentioned in Table 3.2 of the SEP Report of 2025. The SEP Report includes an assessment of their mandated role which could be pivotal to the success of WARDIP SOP-2 Liberia Project.

Once the stakeholders were identified and mapped, a stakeholder analysis was conducted to gain a deeper understanding of the interests of the stakeholder group, how they would be affected and to what extent, as well as the influence they might have on the project. High, medium, and low interest and impact classifications were used to determine the best way to engage stakeholders who are interested in the project and may have the power to affect its outcomes. This also demonstrates how these stakeholders are equally involved throughout the project planning and execution process based on their level of interest (For more detail, refer to Tables 3.3 to 3.7 of the 2025 SEP Report for the WARDIP SOP2 Liberia Project).

Chapter 4 (Stakeholder Engagement Plan) of the 2025 SEP speaks to the Project's stakeholder engagement strategy that draws on lessons learned from other World Bank-financed regional and/or digital projects, analytical work on digital economy under the Digital Economy for Africa Initiative, and lessons drawn from the ongoing implementation of WARDIP SOP1. The Ministry of Post and Telecommunication (MoPT) has been consulting with different stakeholders in the run-up to the second Series of Projects. Field visits and group consultations have been undertaken (in February and in August- September 2025 to engage affected parties at the local execution and central planning levels (refer to Table 4.1 to 4.3).

Information taken from the draft SEP prepared in 2025 for this project would suggest that a total of 118 organisations and individuals have been so far consulted and interviewed. These stakeholders who were identified and characterised according to their statutory functions, responsibilities, and mandates within the ICT sector are believed to have consented to participate in the implementation of the project. The organisations encompass a variety of stakeholder categories, including potential project communities, government institutions, regulators, non-governmental organisations (NGOs) and civil society organisations (CSOs), associations, the private sector, media, and development partners.

Table 11. 1: Summary Feedback Received from Stakeholders (Refer also to Table 4.2 in the 2025 SEP for WARDIP SOP 2 Liberia Project)

Ministry of Finance and Development Planning (MFDP)	Request clarity on budget allocation and sustainability of financing; recommend integration into the national development plan; demand regular financial reporting.

Ministry of Posts and Telecommunications (MPT)	Suggest alignment with existing ICT policies; request inclusion of rural connectivity targets; highlight regulatory needs for digital services.
Ministry of Commerce & Industry	Recommend incentives for private sector adoption; request support for e-commerce platforms and training for SMEs.
National Identification Registry (NIR)	Request system compatibility with existing ID databases; recommend strengthening cybersecurity and data protection measures.
Liberia Telecommunications Authority (LTA)	Suggest setting minimum service quality standards; propose expansion of telecom infrastructure; emphasize fair competition in the market.
World Bank	Recommend adherence to environmental and social safeguards; request detailed results framework; stress capacity-building components.
African Development Bank (AfDB)	Suggest integration with regional ICT infrastructure projects; request co-financing opportunities and measurable development outcomes.
UN Agencies (UNDP, UNICEF, WHO, UNESCO)	Recommend inclusion of marginalized groups; request focus on education, health, and governance applications of digital tools.
European Union (EU)	Request alignment with EU-funded governance reforms; emphasize human rights, privacy, and cybersecurity considerations.
International Telecommunication Union (ITU)	Recommend compliance with international ICT standards; suggest training for national regulators.
Telecom Operators (Orange Liberia, Lonestar Cell MTN)	Request public–private partnership models; seek incentives for rural network expansion; suggest infrastructure-sharing agreements.
Internet Service Providers (ISPs)	Recommend measures to improve internet affordability; request streamlined licensing processes.
Technology Companies & Vendors	Request transparent procurement processes; suggest opportunities for local content development; propose long-term service contracts.
Banks & Financial Institutions	Request integration with mobile money platforms; suggest cybersecurity training for financial transactions.
Chambers of Commerce & Business Associations	Recommend capacity-building programs for members; request favorable policies for digital business growth.
NGOs and CBOs	Request targeted programs for vulnerable groups; suggest affordable community internet hubs; call for local language content.
Academic & Research Institutions	Recommend inclusion of ICT curriculum updates; request research funding on digital transformation impacts.
Media Houses	Request timely project updates; suggest awareness campaigns; emphasize need for public access to information.
Professional Associations	Request professional certification programs in ICT; suggest participation in developing project standards.
ECOWAS Commission	Recommend regional policy harmonization; request data-sharing mechanisms for cross-border services.
Mano River Union (MRU)	Suggest integration with regional digital infrastructure; request collaborative training programs.
Rural Communities	Request affordable and reliable internet services; emphasize local training needs; highlight connectivity gaps.
Women and Girls (specialized female small entrepreneurs, home based workers, etc.)	Suggest women-focused digital literacy programs; request access to devices; emphasize online safety.
Persons with Disabilities (PWDs)	Request accessible digital platforms and assistive technologies; suggest inclusion in design consultations.
Low-Income Households	Request affordable data packages; suggest installment plans for devices.

Youth (especially unemployed or underemployed)	Request digital skills training; suggest creation of online job platforms and innovation hubs.
Older Persons	Request simplified user interfaces; suggest community-based digital literacy sessions; highlight telehealth needs.
Landowners or Land Users along the Right of Way (ROW)	Request fair compensation for land use; demand clear timelines for works; express concerns over property access and livelihood disruption.
Community Members near Construction Sites	Raise concerns about dust, noise, vibration, and temporary access restrictions; request advance notice of works.
Underserved Communities	Request priority access to new connectivity; stress affordability; suggest community internet hubs.
Business Owners Affected by Construction	Request mitigation of access disruption to premises; seek compensation for lost income during works.
Local Transport Operators	Raise concerns about road closures or diversions; request scheduling to minimize disruption to transport services.
Fishing Communities	Express concerns over underwater cable deployment affecting fishing grounds; request engagement on safe fishing zones.
Utility Service Providers	Request coordination to avoid disruption of electricity, water, or other utility services during works.
Local Government Authorities	Request early coordination for permits; seek updates on works schedule; emphasize alignment with local development plans.
Educational Institutions	Request enhanced internet capacity; suggest training programs for teachers and students.
Healthcare Facilities	Request reliable internet for telemedicine; highlight the need for uninterrupted power and service quality.
Port and Coastal Facility Operators	Raise navigational safety concerns during underwater cable installation; request coordination with maritime schedules.
Telecommunication Operators and ISPs	Suggest infrastructure-sharing agreements; request incentives for rural network expansion.
Local Workers and Laborers	Request fair employment opportunities; seek training for technical roles in project implementation.

11.2 Disclosure of ESMF

The World Bank requires that information about the project's environmental and social (E&S) risks and impacts, as well as related documents (ESIAs/ESMPs, BMP, RP, SMP, TMP, GM) prepared should be disclosed and made accessible to project stakeholders. This ensures transparency, informed participation, and enables stakeholders to understand the potential risks and impacts, as well as the measures in place to mitigate them, throughout the project lifecycle. This is in line with Liberia's Environmental Protection regulations, ensuring that stakeholders are informed and can participate in the decision-making process to address risks and impacts effectively throughout the project lifecycle.

Table 11.2 outlines the information to be disclosed, methods of dissemination, and proposed timing for each project stage:

Table 11. 2: E&S Information Disclosure Plan (Also, refer to Table 4.4 in the 2025 SEP Report for the WARDIP SOP 2 Liberia Project)

Project Preparation and Implementation	• Environmental and Social Management Framework (ESMF) • Stakeholder Engagement Plan (SEP) • Labour Management Procedure (LMP) • Environmental and Social Commitment Plan (ESCP) • GRM	• Official websites • Newspaper publications • Workshops • Consultation with affected parties in community spaces • Distribution of printed documents in relevant institution	• Prior to project implementation • Throughout project implementation
Before Construction and during construction	• Project design and implementation Detailed project scope • ESIAs/ESMPs, LMP • Occupational Health and Safety Plan • Traffic Management Plan • Security Management Plan • RAPs/ARAPs • Gender Action Plan • GRM • Emergency preparedness and response • Information on project benefits and compensation • Project progress reports	Project inception stakeholder meetings Stakeholder meetings Online publication Community safe spaces, Town halls, Newspaper publications, Radio adverts Traditional and social media, town(hall) accouchements Publication on official websites Community meetings, notice boards, etc. Face-to-face Meetings, Individual outreach to PAPs as needed Trainings/workshops (separate meetings specifically for women and vulnerable as needed) Community safe spaces, community halls Notice boards of National, local and community government	• Before the start of construction
Completion Phase	Project Completion Report	Publication on website Hard copies distributed at meetings Hard copies submitted to selected government offices	• 40 days before project closing date

12.0 INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENT AND CAPACITY BUILDING

12.1 Institutional Arrangements

The overall responsibility for implementing the WARDIP-SOP2 project will rest with Ministry of Post and Telecommunication (MoPT). The ministry will collaborate closely with other relevant ministries and their respective departments and agencies, including with the Ministry of Public Works (MPW) on road works and the Liberia Land Authority that is responsible for aspects of compensation payments, as its mandate includes implementing policies and programs for land governance, which covers the resettlement and compensation of project-affected persons. The authority is a key body in ensuring that projects follow procedures outlined in a Resettlement Action Plan (RAP), which specifies how to compensate people who are displaced or lose assets due to a project. The Steering Committee[9] will include representatives of all relevant ministries and agencies, the private sector, non-governmental entities, and representatives of youth and women's organizations. The Steering Committee will meet at least twice per year and will be chaired by the Minister for Post and Telecommunication and/or its designated representative.

The MoPT will execute the project through its Project Management Unit (PMU), which is charged with the preparation and management of externally funded programs. The PMU will ensure compliance with all the legal and mandatory procedures stipulated in the financing agreement for WARDIP-SOP2, including regular reports, audits, and safeguard compliance. The PMU will delegate the functions and responsibilities of day-to-day project coordination and management, including M&E, to a strengthened unit within its structure which is the Project Implementation Unit (PIU). This PIU will be further strengthened with additional staff including international expertise (**Environmental Specialist and Social Specialist)** to enhance project implementation and delivery. Administratively, the PIU will report to the supervising ministry through the PMU. The WARDIP-SOP2's PIU will be headed by a Coordinator and will include a Procurement Specialist, Project Accountant, Environmental Specialist, Social Development Specialist, M&E Specialist, MIS Specialist, Infrastructure Specialist, Advisory Services Specialist, and a support staff. Additionally, the PMU will appoint County-level Focal Persons who will be responsible for preliminary E&S screening of subproject activities and ensure general E&S compliance at the county levels.

A robust M&E system will be built within the PIU to effectively monitor and evaluate the project. The PIU will have overall responsibility for the project M&E system and will work closely with actors to monitor project results, including output and outcome indicators. The M&E Specialist will be a well-qualified person with appropriate technical knowledge and experience to manage the day-to-day activities of the project M&E system. Data will be collected primarily by the team in each participating county, under the supervision of the M&E Specialist. The team will also work with relevant stakeholders and appropriately trained project actors to facilitate additional data collection. The PMU will liaise and coordinate with the relevant ministries, departments, agencies, and other government institutions (including research institutes), the private sector, and other projects to support monitoring and reporting.

[9] The following institutions have already been notified to serve on the **Steering Committee** for the entire duration of the project, unless otherwise communicated: MoPT; MFDP; CBL; IIC; LTA; CCL; New Cable Consortium; LRREN; EPA; MoGSP; MICAT; NIR; MoCI; MoE; Liberia ICT Student Union and Liberia Chamber of Commerce. The MoPT will consider expanding or streamlining the SC into smaller working groups, depending on stakeholder interests, and multisectoral project impact.

The M&E system will employ an MIS to manage data and provide real-time information to project managers, which will increase overall efficiency and performance by facilitating the identification of problems and analysis of trends. The MIS will incorporate outcome and output indicators for each project component and subcomponent, performance indicators for all key project activities, a gender tracker, and safeguard indicators. For all indicators, the MIS will provide clear guidance on units of measure, frequency of data collection, data collection responsibilities, data source and methodology, definitions, and formulae. Reporting templates will also be available through the MIS where appropriate.

The project will collect both qualitative and quantitative data. Data will be collected at the beginning of the project to establish a baseline, against which subsequent data will be measured. Field books, surveys, project completion reports, training logbooks, grant proposals, and other data sources will be employed to regularly inform key performance indicators, gauge dynamics of the business linkages, and monitor implementation progress. At mid-term, a rapid survey will be conducted to assess whether the project is on course to achieve its objectives. An end-of-project survey will be conducted to assess the achievement of project targets and inform government project completion reports.

12.2 Capacity Building Needs

MoPT and other implementing agencies have worked and implemented projects with some level of safeguards management experience in World Bank-funded projects. That notwithstanding, these Ministries have little and/or no experience working under the new Environmental and Social Framework (ESF) of the World Bank, therefore their capacity would have to be built to improve on the management of the projects' environmental and social risks and impacts and to ensure effective coordination of the national and subnational level implementation of environmental and social risk mitigation measures. For effective implementation of this ESMF, there will be a need for technical capacity building for the staff of implementing agencies and other stakeholders.

The PIU's E&S Specialists will be responsible for organizing and assisting in training the personnel of the project stakeholder agencies in all aspects of the ESMF including creating a general awareness of environmental and social management issues. They will also be responsible for identifying and selecting suitable resources persons and for preparing ESF/ESSs training modules and materials including E&S manuals to guide project beneficiaries in project implementation.

For the Project Management Unit and other committees, there will be a need to build their capacity in areas of mainstreaming environmental and social issues in development projects, and the following topics/areas are proposed:

a. Introduction to World Bank's Environmental and Social Framework (ESF);
b. Environmental and social instruments requirements in development projects;
c. Environmental and social screening and;
d. Environmental and social reporting

This training can be delivered in the form of seminars. On the other hand, there will be a need to support the capacity of County/District/ Municipalities Environmental and Social actors, PIU/PMU Environmental and Social Specialists, County-level Focal Officers, EPA staff, and other staff in the PCU/PIU. These categories will be trained in areas such as:

a. World Bank Environmental and Social Standards;
b. Liberia EPA Environmental Assessment Regulations;
c. Preparation and review of screening reports;
d. Introduction to ESMF/RPF;
e. Preparation of ToRs for Subject Area Specialist (ESIA, Resettlement);
f. Preparation of Environmental Briefs and the ESIAs, RAPs, etc.;
g. Technical training to support implementation of the ESMF;
h. Training on mainstreaming social and gender-related issues (OHS and HIV/AIDS);
i. Monitoring and Evaluation of WARDIP-SOP2 Liberia;

12.3 Capacity Building for Collaborating Institutions

It is anticipated that there will be a range of collaborating institutions under the project. These will include CSOs and NGOs, and the private sector players and participating ICT actors. Each of these categories will require responsive capacity enhancement on aspects of safeguards issues based largely on their levels of involvement in WARDIP-SOP2 Liberia project activities. Capacity building will be in form of training on safeguards, mainstreaming, monitoring and reporting.

Table 12. 1: Capacity building plan and training program

1	Review of WB ESS and its Implementation during the project cycle National environmental requirements for the project preparation and implementation	During the first year of the Project implementation. Duration – 2 days	Head of MoPT, PIU and their experts and key stakeholders	E&S Specialist Consultants at PIU and World Bank E&S Specialists
2	Implementation of ESMF, ESMP, RPF, ARAP/RAP, SEP, GM	Before the selection of sub-projects Duration - 2 days	ES&SS of the MoPT/PIU, EPA and key stakeholders IPs	E&S Specialist Consultants at PIU
3	ESMF, ESMP, social screening	Prior to the selection of sub projects Duration - 1 day	EPA/EIA working group and regional TACs/ANR sub committees	E&S Specialist Consultants at PIU
4	SEA/SH training and awareness-raising / implementation of SEA/SH action plan	To be delivered in a combined manner	MoPT staff Contractors and Supervisors, Partners at the national and regional level Local government /community members	E&S Specialist Consultants at PIU
5	Preparation of capacity-building manual and training on relevant identified topics for the project stakeholders	To be done in stages from the inception of the project implementation	MoPT staff Contractors and Supervisors, Partners at the national and regional level	E&S Specialist Consultants at PIU

12.4 Capacity Requirement of Contractor and Supervising Consultant

The adequate capacity of contractors and supervising consultants is essential to meet project objectives and adhere to Environmental, Social, Health, and Safety (ESHS) standards. Contractors and Supervising Consultants must have and maintain a team of highly qualified professionals with demonstrated expertise and experience in relevant disciplines, including engineering, project management, environmental and social safeguards, occupational health and safety, and quality control. They must have the technical skills and knowledge required to ensure the successful execution of the project while adhering to regulatory requirements.

Table 12. 2: Required Qualification and Expertise for Contractors and Supervising Consultants

Contractor	Project Manager	• **Qualifications:** Master's degree in civil engineering, Construction Management, or related field. • **Expertise:** Extensive experience managing large-scale construction projects, strong leadership and decision-making skills, familiarity with ESHS standards, and excellent communication and project planning skills.
	Environmental Specialist	• **Qualifications:** Master's degree in environmental science, Environmental Engineering, or related discipline. • **Expertise:** Extensive experience conducting environmental impact assessments/audits, implementing mitigation measures, waste management, pollution control, occupational health & safety, and knowledge of environmental regulations and best practices.
	Social Specialist	• **Qualifications:** Master's degree in Sociology, Social Work, Anthropology, or a related field. • **Expertise:** Extensive experience in community engagement, stakeholder management, grievance redress mechanisms, gender-related issues such as GBV/SEA) and understanding social impact assessments, resettlement and mitigation strategies.
	Health and Safety Officer	• **Qualifications:** Bachelor's degree in occupational health and safety, Engineering, or related field; certification in safety management (e.g., NEBOSH, OSHA). • **Expertise:** Strong knowledge and extensive experience of workplace safety protocols, hazard identification, risk assessment, emergency response planning, and safety training delivery.
	Quality Assurance/Quality Control (QA/QC) Officer	• **Qualifications:** Bachelor's degree in civil engineering, Quality Management, or related discipline. • **Expertise:** Experience in construction quality management, site supervision, inspection procedures, and ensuring compliance with industry standards.
Supervising Consultant	Team Leader	• **Qualifications:** Master's degree in engineering, Project Management, or a related field. • **Expertise:** Extensive experience leading and managing large, multidisciplinary project teams, strategic planning, stakeholder engagement, and a strong understanding of ESHS requirements.
	Environmental Specialist	• **Qualifications:** Master's degree in environmental science, Environmental Engineering, or related field.

	● **Expertise:** Expertise in environmental monitoring and impact assessment and familiarity with environmental compliance techniques.
Social Specialist	● **Qualifications:** Master's degree in social sciences, Sociology, or a related field. ● **Expertise:** Skills in social risk management, labour issues, community relations, impact assessments, resettlement, and designing and implementing social mitigation measures.
Health and Safety Specialist	● **Qualifications:** Bachelor's degree in occupational safety and health, Engineering, or a related discipline; relevant certifications. ● **Expertise:** Proficiency in health and safety risk assessments, training and implementation of safety programmes, and ensuring compliance with safety regulations.
Quality Assurance/Quality Control (QA/QC) Officer	● **Qualifications:** Bachelor's degree in engineering, Quality Management, or a related field. ● **Expertise:** Knowledge of quality control practices, conducting inspections and audits, and ensuring project compliance with QA/QC standards.

13. MONITORING, EVALUATION & REPORTING

Monitoring is required to ensure that all the required environmental and social mitigation measures, set out in this ESMF (and also in the SEP, LMP) for the project are implemented satisfactorily. The objective of monitoring is to ascertain that the proposed mitigation measures are being implemented and that there is compliance with the terms and conditions for approval.

The purpose of environmental and social safeguards monitoring includes:

a. Ensure that proper appraisals on the effects of sub-projects take place and that proper measures are put in place to mitigate the effects;
b. Set out the basis for compliance and enforcement of terms and conditions for approval; Design compliance strategies;
c. Assess compliance with management of the environment and social safeguards; and
d. Ensure that all stakeholders participate in the sub-project processes

The environmental and social safeguards monitoring will be carried out by the staff of PMU alongside the County/District/Municipal actors and the EPA. The Environmental and Social Monitoring Unit (ESMU) staff verify the application of mitigation measures as contained in the field reports submitted to the Unit. In this case, the ESMU staff will undertake regular visits to project sites to provide technical support and document progress in implementing mitigation measures. Where feasible, County Environmental Officers will support monitoring in line with mandates which is to oversee compliance of development project in the districts with environmental provisions. Reporting on environmental monitoring will be included in the overall project progress reports, which will be shared with the World Bank, EPA and other line stakeholders as necessary.

Environmental and Social Monitoring

- For this project, environmental monitoring will focus on parameters most likely to be influenced by cable landing and associated activities. Within the marine and coastal ecosystems (benthic habitats, mangroves, and fisheries resources), parameters will include: i) undertaking periodic tracking to detect any disturbance caused by installation or maintenance, ii) regular water quality monitoring by testing for turbidity, salinity, dissolved oxygen, and pollutants (oil, grease, heavy metals) during and after construction, iii) monitoring air quality and acoustic emissions from machinery, dust generation, and noise levels to ensure compliance with national and international standards, iv) monitoring coastal erosion and sediment transport, v) undertaking long-term tracking of shoreline changes to identify cumulative impacts from both the cable project and other coastal developments.
- Social monitoring will ensure that the project contributes positively to communities and minimizes disruption to livelihoods. This will include i) tracking of jobs created, disaggregated by gender, age, and community of origin, for instance monitoring the effectiveness of livelihood restoration efforts for fishers and traders in Big Fanti Town; ii) tracking and recording incidents of accidents, exposure to dust or noise, and risks related to traffic and marine operations; iii) monitoring participation of women, youth, and marginalized groups in employment, training, and decision-making to ensure social inclusion and equity; and iv) assessing the functioning of the Grievance Redress

Mechanism (GRM), including number of complaints received, resolved, and pending as a measure of the effectiveness of the grievance redress.

Table 13. 1: Project's comprehensive E & S monitoring plan that will guide overall monitoring processes

Sub-project Preparation	All relevant permits (EPA, etc.)	Before the start of works	Check documentation	Once at the start of the project	Ensure compliance with ESMF and ESS1	Safeguard team EPA-EIA working group
	Land Agreements	Before the start of works	Check documentation	Once at the start of the project	Ensure compliance with ESS5	Safeguard team
	Asset Management Agreement with	DAs Before the start of works	Check documentation	Once at the start of the project	Ensure compliance with ESMF & ESS1	Safeguard team
Sub-project Implementation	Environmental impacts (dust, noise, erosion, etc.)	Construction Site	Observation	Daily	Minimize environmental impacts and ensure compliance with ESMF & ESS1	Contractor team Communities, NGOs
	Social impacts (skill development, female empowerment, etc.)	Construction Site	Observation	Daily	Minimize social impacts and ensure compliance with ESMF & ESS1	Contractor team
	PPEs, etc.)	Construction Site	Observation	Daily	Minimize OHS Impacts and ensure compliance with ESMF & ESS1	Contractor team
	Burrow pit reclamation	Prior to the end of Construction	Observation	Project completion	Ensure compliance with ESMF & ESS1	Safeguard team/NEA EIA working group
	Accident & Grievance reporting	Construction Site	Observation	Daily	Ensure compliance with ESMF and RPF, ESS1	Safeguard team Contractor team
Sub-project Operational Phase	Asset management (maintenance, erosion, siltation, flooding, etc.)	Operational site	Site visits, audits	Quarterly	Ensure compliance with ESMF & ESS1	MoPT and EPA EIA working group

13.1 Budget for Implementation

Table 13. 2: Budget for ESMF Implementation

1	Capacity building and training Program, including • public awareness raising for 200 MoPT and project staff. • study tours/exchange visits for selected social and environmental champions (20no.) participating in the project.	60,000	WARDIP-SOP2 Liberia	Consultant/EPA
3	Mobilization and sensitization of beneficiary institutions and communities.	10,000	WARDIP-SOP2 Liberia / MoPT	MoPT E&S Specialists/ EPA
4	Environmental Screening and Preparation of ESIAs, BMPs, ESMPs, RAPs, SMPs and relevant subsidiary instruments and studies.	150,000	WARDIP-SOP2 Liberia	Consultant/NEA
5	Environmental and Social Audits for project investments in the target areas.	80,000	WARDIP-SOP2 Liberia	Consultant
6	Environmental and social safeguards monitoring and reporting.	60,000	WARDIP-SOP2 Liberia	MoPT E&S Specialists/ EPA
7	Support to EPA to enhance its capacity for effective participation in the implementation of the project activities and delivery (MoU with EPA).	100,000	WARDIP-SOP2 Liberia /MoPT/EPA	EPA
8	Final assessment of the ESMP	40,000	WARDIP-SOP2 Liberia	Consultant/EPA
	Total (USD)	**500,000**		

14.0 CONCLUSIONS AND RECOMMENDATIONS

The Ministry of Post and Telecommunication prepared this ESMF for WARDIP-SOP2 Liberia project that will be implemented in appropriate manner to ensure the project implementation is in full compliance with national environmental legislation and World Bank environmental and social framework (ESF).

At this stage of project design and preparation, the Environmental and Social Risk associated with the Project is assessed as Substantial. This rating is reflective of the nature and scope (scale and technical complexity and location) of project activities, particularly those proposed under Component 2 which involves the construction and installation of submarine fiber-optic telecommunication cables and ancillary facilities onshore in Liberia. The current capacity of the MoPT to effectively manage environmental and social risks in line with the WB ESSs also informed the E&S risk rating. Given the fact that the nature and scope of the project is not fully known at this stage of project design, the recommendation has been to prepare an ESMF as a framework to predict potential E&S risks and impacts and suggest measures and actions to address them.

Initial assessment suggests that the project does not seem to present any long-term or irreversible risks. Key potential environmental risks and impacts predicted at this stage include: 1) disturbance of marine and coastal habitat and biodiversity during construction and operation; 2) sedimentation and its effects on sea water quality; 3) improper waste management of construction and hazardous materials; 4) occupational health and safety of workers; 5) air and noise pollution from both construction and operational phases; and 6) high energy consumption during operational phase. The main social risks identified include physical displacement and disruption of economic activities and livelihoods due to land acquisition during construction and installation phase. Disruption of fishermen's livelihoods may stem from the laying of submarine cables; and potential loss of access to fishing grounds resulting from the construction of the landing stations. Additional social risks may relate to the broader fisheries value chain, labor and working conditions, community health and safety, temporary disruption of shipping and sea navigation during cable laying, and potential impacts on coastal infrastructure from landing facility construction. Land acquisition for the landing facility also raises concerns about displacement and livelihood restoration. The likelihood that the Project may attract migrant workers is minimal given that the subprojects do demand professional and technical skills that may not be found within the project communities and the neighboring communities. Thus, the risk of labor-related social issues such as forced labour, cxhild labour, sexual exploitation, abuse, or harassment are perceived to be on the low side and may be easily managed. Generally, social risks may be addressed through robust stakeholder engagement, transparent land acquisition processes, livelihood restoration measures, strict enforcement and monitoring of labor and OHS standards, and establishment of effective grievance redress mechanisms at various levels.

During the operation phase of the project , it is expected to leave a high carbon footprint, driven primarily by the immense energy needed for server operation and cooling, but also includes emissions from energy consumption, water use, hardware manufacturing, and infrastructure.

Cost-effective mitigation measures have been proposed to address the potential risks mentioned above. Most of these risks can be effectively addressed through the application of internationally accepted construction industry best practices, strict enforcement of occupational health and safety standards, integration of biodiversity management measures, optimization of energy use,

and adoption of sustainable sourcing and procurement practices. Also, this ESMF has an inbuilt grievance procedure that will be used to address grievances that can arise during the project implementation. The ESMF has proposed the preparation of subproject-specific Environmental and Social Impact Assessments/Environmental and Social Management Plans (ESIAs/ESMPs) with corresponding mitigation and monitoring plans for addressing potential adverse risks and impacts.

Successful implementation of this ESMF will depend largely on the involvement and participation of local communities and effective and efficient delivery on the part of implementing entities. However, capacity of MoPT in E&S risk management is limited. To address this limitation, it is suggested to 1) request support from the EPA; 2) establish a project implementation unit (PIU) staffed with experienced and competent E&S officers; and 3) WB to continue to provide continuous support to the PIU by strengthening the Borrower's capacity through tailored training, technical assistance, and knowledge exchange. In addition, the Project is advised to provide environmental and social awareness and education to key stakeholders and affected communities.

The submarine cable landing project is a strategic national investment with the potential to transform Liberia into a more digitally connected, economically resilient, and socially inclusive society. Its success depends not only on the physical infrastructure but also on responsible environmental stewardship, inclusive community engagement, and capacity building. If implemented in accordance with the ESIA recommendations, the project will set a strong precedent for sustainable infrastructure development in Liberia and contribute significantly to the nation's progress toward a digital economy and sustainable development. The proposed installation of a second submarine cable in Liberia represents a critical step toward enhancing the country's digital connectivity, improving broadband reliability, reducing internet costs, and fostering inclusive economic growth. The project, which includes the landing of the undersea cable in Big Fanti Town (Buchanan) and the construction of a new Cable Landing Station (CLS) to interconnect with the CLSG substation, is strategically aligned with Liberia's national development priorities and regional digital integration goals.

Recommendations

The ESIA demonstrates that the potential risks can be effectively mitigated through robust planning, stakeholder engagement, and E&S mitigation and best management practices. With proper implementation of mitigation measures, the project can achieve a balance between technological advancement, community well-being, and environmental sustainability. Based on which financing is being provided to the Borrower and its capacity to attract additional financing, the following recommendations are suggested:

- Strengthening environmental management by (i) implementing a comprehensive ESMP covering coastal erosion control, fisheries protection, waste management, and air quality monitoring; and (ii) establishing long-term early monitoring system of marine habitats, water quality, and shoreline changes to detect and address impacts including cumulative impacts.
- Promoting inclusive social development by (i) prioritizing local employment opportunities for residents of Big Fanti Town and Grand Bassa County during construction and

operations, (ii) supporting vulnerable groups such as women's groups, youth associations, and fisherfolk cooperatives with livelihood restoration, training, and digital entrepreneurship programs, and (iii) ensuring fair and transparent benefit-sharing so that vulnerable and marginalized groups are not excluded from project benefits.

- Enhancing institutional capacity by (i) building the technical and regulatory capacity of the Liberia Telecommunications Authority (LTA), Environmental Protection Agency (EPA), and National Fisheries and Aquaculture Authority (NaFAA) to monitor, regulate, and enforce standards. And (ii) equipping local government and community leaders with tools and training for project oversight, grievance management, and ICT integration.
- Implementing effective stakeholder engagement, (i) maintaining continuous consultations with affected communities, particularly fisherfolk and women traders in Big Fanti Town (ii) operationalizing a Grievance Redress Mechanism (GRM) that is accessible, culturally appropriate, and responsive to community concerns, and (iii) providing regular public reporting on project progress, environmental performance, and social outcomes to build transparency and trust.
- Further studies are recommended to ascertain if the project is likely to be exposed to external environmental factors such as storms and waves, which must be addressed through robust technical and engineering design.
- Adopting green and sustainable approaches by (i) encouraging the use of renewable energy and energy-efficient technologies to power ICT facilities, data centers, and cable operations, and (ii) integrating the project into national climate resilience strategies, ensuring that connectivity expansion supports adaptation to sea-level rise, storms, and coastal erosion.
- Monitoring cumulative and Indirect Impacts by (i) developing a framework for assessing interactions with port activities, urban growth, and fisheries exploitation, and (ii) collaborating with other infrastructure developers in Buchanan to harmonize environmental and social safeguards.
- Sustaining community benefits from the project by (i) establishing community ICT hubs in Buchanan and beyond to ensure affordable access to high-speed internet, (ii) partnering with educational institutions to expand ICT training and research, and (iii) promoting digital literacy programs that enable communities to fully benefit from the cable's opportunities.

ANNEX 1: SCREENING CHECKLIST/FORM

1A. Template for Environmental and Social

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 Metropolitan, Municipal and District Assemblies (MMDAs) 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]

#	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	

#	Site Characteristics	
	(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? ● generation of dust ● generation of smoke ● generate fumes? ● generate emissions ● Create objectionable odour 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							

If implemented, would the activity Potentially	Yes	No	If yes, give a brief description	If yes indicate frequency of occurrence			
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)?							
Cause disruption of wildlife migratory routes?							
Harvest wetland plant materials or utilise sediments of bodies of water?							
Involve the harvesting of timber resources?							
Involve the harvesting of non-timber resources?							
Promote in-forest bee keeping?							
Lead to increased hunting or the collection							

If implemented, would the activity Potentially	Yes	No	If yes, give a brief description	If yes indicate frequency of occurrence			
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?							

If implemented, would the activity Potentially	Yes	No	If yes, give a brief description	If yes indicate frequency of occurrence			
• by generating liquid with odour/smell?							
Lead to changes in the drainage pattern of the area, resulting in erosion or siltation?							
Lead to an increase in surface run-off, which could result in flooding on or off-site?							
Increase runoff, which could exceed the capacity of existing storm water drainage?							
Increase potential for flooding?							
Potentially pollute or contaminate surface water?							
Potentially pollute or contaminate groundwater resources?							
Affect existing streamflow, and reduce seasonal availability of water resources?							
Agricultural and Forestry Production:							
Affect existing or traditional agricultural production systems by reducing seed availability or reallocating land for other purposes?							
Lead to forest plantation harvesting without replanting, the burning of pastureland, or a reduction in fallow periods?							
Affect existing food storage capacities by reducing food inventories or encouraging the incidence of pests?							
Affect domestic livestock by reducing grazing areas or creating conditions where livestock disease							

If implemented, would the activity Potentially	Yes	No	If yes, give a brief description	If yes indicate frequency of occurrence			
problems could be exacerbated?							
Involve the use of insecticides, herbicides, and/or other pesticides?							
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?							

If implemented, would the activity Potentially	Yes	No	If yes, give a brief description	If yes indicate frequency of occurrence			
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, and industrial sludge.							
Require changes to the 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 a resource usage where they have traditional or customary tenure or recognizable usage rights?							
Lead to physical displacement? 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.							

If implemented, would the activity Potentially	Yes	No	If yes, give a brief description	If yes indicate frequency of occurrence			
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 them livelihoods and economic well-being							
Cause a disruption on Power or other utility supply?							
Affect the livelihood opportunities of people?							
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							

If implemented, would the activity Potentially	Yes	No	If yes, give a brief description	If yes indicate frequency of occurrence			
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 recognised cultural heritage site?							
Affect culturally important sites in the community such as sacred areas, burial grounds or cemeteries?							
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 a 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 behaviour (e.g., prostitution and crime).							

If implemented, would the activity Potentially	Yes	No	If yes, give a brief description	If yes indicate frequency of occurrence			
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 increase road traffic, vehicles or fleets of vehicles for the purposes of the activity?							
Involve the use of Security personnel?							
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, PCBs, 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 in unbounded asbestos fibres.							

D. Risks Classification

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

Risk areas	Low Risk[10]	Moderate Risk[11]	Substantial Risk[12]	High Risk[13]
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

[10] Minimal or no adverse social or environmental risks and impacts.

[11] Potential adverse social and environmental risks and impacts that are limited in scale, are largely reversible and can be identified with a reasonable degree of certainty and readily addressed through application of recognised good international practice, mitigation measures and stakeholder engagement during project implementation.

[12] Potential adverse social and environmental risks and impacts that are more varied or complex than those of Moderate Risk projects but remain limited in scale and are of lesser magnitude than those of High Risk projects (e.g. reversible, predictable, smaller footprint, less risk of cumulative impacts).

[13] Potential significant adverse social and environmental risks and impacts that are irreversible, unprecedented and/or which raise significant concerns among potentially affected communities and individuals as expressed during the stakeholder engagement process as part of the screening.

#	If implemented, would the activity require permit or approval from the following national regulatory agencies?	Yes	No	Justification
1	Environmental Protection Agency			
2	Forestry Commission			
3	Water Resources Commission			
5	Food and Drugs Authority			
6	Minerals Commission			
7	Plant Protection & Regulatory Services			
9	District Assembly			

G. Clearance

Approval's	
Name:	
Signature:	
Date:	

1B. Screening Checklists for Identifying Cases of Involuntary Resettlement

SCREENING CHECKLIST FOR IDENTIFYING CASES OF INVOLUNTARY RESETTLEMENT

A. DETAILS OF THE PERSON DESIGNATED TO COMPLETE THE FORM

1. Name: _____
2. Contact Details
    a. Street Address_____
    b. Ghana Post Digital Address_____
    c. Email _____
    d. Mobile Phone _____
3. Position/Institution: _____
4. Completion Date (DD-MM-YYYY: _____
5. Signature: _____

B. DESCRIPTION OF PROJECT/SUBPROJECT

1. Name of project: _____
2. Name of project execution unit/organisation: _____
3. Type of Subproject/Project: _____
4. Approximate size of the project/subproject in land area: _____
5. Location of the Project:
    a. County: _____
    b. District: _____
    c. Town/Community: _____

C. ENVIRONMENTAL AND SOCIAL IMPACT CHECKLIST

Please complete the checklist by selecting the applicable response:

Question	Yes	No	Comments
Will the subproject lead to the permanent acquisition of the land?			
Will the subproject lead to temporary occupation or use of the land for a limited time frame?			
Based on available sources, consultations with the local community or observation, could the project alter any cultural heritage site?			*Describe the potential effect.*
Will the project result in the physical displacement of people?			
Will the project result in permanent removal, damage, or demolition of structures or buildings?			
If yes, what is the estimated number of structures or buildings that will be affected?			
Will the project result in the temporary removal or relocation of structures?			
If yes, what is the estimated number of structures or buildings that will be relocated?			
Will the project affect or block access to homes, organisations, farms, forests, or general assets?			
Will the project result in permanent or temporary loss or damage to cash crops, tree crops, fruit plantations, or economic trees?			
Will the project result in the loss of income for the affected farmers or businesspersons?			

SCREENING CHECKLIST FOR IDENTIFYING CASES OF INVOLUNTARY RESETTLEMENT			
Will the project affect farmlands that have been cleared but not cultivated?			
How many persons will be impacted by the project?			

D. PROPOSED ACTIONS OR DECISIONS RULES

1. If the answer to all the above is NO, the project can commence without resorting to the RPF
2. Suppose the answer to all the above is NO with the exception of permanent land acquisition and/or temporary land occupation. In that case, the requirements of the RPF should be followed to address compensation.
3. If there is permanent land acquisition or temporary land occupation, or if there is no land acquisition but one or more of the other questions resulted in a YES response, further action is required. The number of affected persons needs further investigation to determine which resettlement instrument should be prepared in line with the RPF to address the resettlement and compensation-related issues.
4. Actions to address compensation issues include:
    a. The preparation of the RAP will involve the following key activities:
        i. Consultation with subproject stakeholders.
        ii. Census of Affected Persons and Assets or Socioeconomic baseline to identify the persons, assets, and livelihood affected by the subproject. This will be used to operationalize the eligibility criteria.
        iii. Valuation of land or affected properties.
        iv. Development of RAP report.
        v. Consultation and disclosure of the RAP documents.
        vi. Compensation payment.
        vii. Seek approval of RAP from the World Bank before the commencement of resettlement activities. Resettlement activities must be completed before specific subproject activities—field or civil works—commence.

E. COMMENTS BY THE PERSON FILLING THE FORM

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

F. **COMMENTS BY THE PROJECT SOCIAL SPECIALIST OR PIU/DUR**

(The PIU should sign off this form and attach a copy to the project proposal)

_____
_____
_____
_____
_____

SCREENING CHECKLIST FOR IDENTIFYING CASES OF INVOLUNTARY RESETTLEMENT

_____

Name:
Date:
Signature:

ANNEX 2: EXCLUSION LIST/NEGATIVE LIST

A negative or exclusion list in projects consists of specific activities, sectors, or products that are prohibited due to ethical, social, environmental, or legal reasons. These lists are used to prevent investment in or support for ventures that violate norms or values, such as those involved in weapons manufacturing, tobacco, human rights abuses, or environmental degradation. For public procurement, exclusion lists can also include companies that have been convicted of serious crimes like corruption or fraud.

The following goods, services or activities, among others, are prohibited under this Project:

- Procurement of goods and services through security forces (including but not limited to.
- Staff overtime payments for members of security forces (as per the above).
- Use of prison labor, child labor, or forced labor
- Any civil works including but not limited to water supply schemes, irrigation schemes, dams, diversion or damming of water courses, land reclamation.
- Installation of bailey bridges.
- Construction or refurbishment of storage facilities for fuel and other hazardous substances.
- Activities involving massive (large-scale) land acquisition, restrictions on land use or resettlement (both temporary and permanent); forced evictions.
- Activities in protected and sensitive areas including riverbanks, key biodiversity areas, migratory bird resting and brooding sites, marine protected areas, wildlife protected areas, wetlands of International Importance (RAMSAR sites), and critical habitats (e.g., coral reefs).
- Activities in known national or internationally recognized cultural heritage sites.
- Sanitary waste management.
- Procurement, storage, or distribution of large amounts of fuel.
- Procurement, storage, or distribution of goods with chlorine or other hazardous substances such as ODS, PCB, etc.
- Storage and distribution of medicine and veterinary medicine.
- Direct operation of shelters, including activities such as camp establishment, land agreements and compensation, and the provision of sanitation and waste management services.
- Production or trade in any product or activity deemed illegal under the national laws or regulations of Liberia or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone depleting substances, PCBs, wildlife or products regulated under CITES.
- Production or trade in weapons and munitions.
- Production or trade in alcoholic beverages.
- Production or trade in tobacco.
- Gambling, casinos and equivalent enterprises.
- Production or trade in radioactive materials. This does not apply to the purchase of medical equipment, quality control (measurement) equipment and any equipment where the World Bank considers the radioactive source to be trivial and/or adequately shielded.
- Production or trade in unbonded asbestos fibers. This does not apply to purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.
- Drift net fishing in the marine environment using nets in excess of 2.5 km. in length.

ANNEX 3: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) TEMPLATE

Here is a standard template and outline for an Environmental and Social Management Plan (ESMP), based on World Bank guidance and recent project examples. This template can be adapted to your specific project and country context.

Environmental and Social Management Plan (ESMP) Template

1. Executive Summary
- Brief overview of the project, key environmental and social risks, and summary of mitigation measures.

2. Introduction
- Project name and description
- Background and rationale for the ESMP
- Objectives of the ESMP

3. Policy and Legal Framework
- Relevant national policies, laws, and regulations
- Applicable World Bank Environmental and Social Standards (ESS)
- Required permits and approvals

4. Project Description
- Detailed description of project activities, location (with maps), design features, resource requirements, workforce, and schedule
- Justification and expected benefits

5. Environmental and Social Baseline
- Description of the physical, biological, socio-economic, and cultural environment in the project area

6. Stakeholder Engagement and Consultation
- Summary of stakeholder engagement activities
- Key issues raised and responses

7. Impact Assessment and Mitigation Measures
- Identification and assessment of potential adverse environmental and social impacts
- Mitigation measures for each identified impact, following the mitigation hierarchy (avoid, minimize, mitigate, offset)
- Compensatory measures, if applicable

8. Environmental and Social Management and Monitoring Plan
- **ESMP Matrix/Table** including:
  - Project activity
  - Potential risks and impacts
  - Mitigation measures
  - Monitoring indicators and frequency
  - Responsible parties
  - Budget/cost estimates

9. Institutional Arrangements and Capacity Building
- Roles and responsibilities for ESMP implementation
- Capacity building and training needs

10. Implementation Schedule and Budget
- Timeline for implementation of mitigation and monitoring measures
- Budget and funding sources

11. Grievance Redress Mechanism
- Procedures for addressing complaints and grievances from stakeholders

12. Reporting, Supervision, and Review
- Monitoring and reporting procedures
- Supervision and review arrangements

13. Annexes

- Terms of Reference for ESMP preparation
- Environmental and Social Screening Forms
- Waste Management Plan
- Occupational Health and Safety Plan
- Traffic Management Plan
- Codes of Conduct for workers
- Records of public consultations

ANNEX 4: BIODIVERSITY MANAGEMENT PLAN TEMPLATE – CORE COMPONENTS

Generally, a Biodiversity Management Plan (BMPl) is prepared as part of the Environmental and Social Impact Assessment (ESIA) process and forms part of the outcome of the ESIA, and any supplementary impact assessment (SBA) such as a critical habitat assessment (CHA). A BMPl will provide an instructional working document for the management of biodiversity impacts during Project design and implementation, and will be used by the MoPT and its contractors to ensure that necessary measures are implemented to comply with national laws, international frameworks and World Bank Environmental and Social Framework (ESF), specifically Environmental and Social Standard 6 (ESS6, Biodiversity Conservation and Sustainable Management of Living Natural Resources), and to address stakeholder concerns relating to biodiversity and ecosystem services, as may be identified in the ESIA. If potential threats may be posed to biodiversity under this project, MoPT will prepare a BMPl that describes mitigation and management measures, identifies the parties responsible for their implementation (e.g., company, contractor, and government) and specifies the required monitoring and monitoring schedule. It will be a "live" document and is expected to evolve and to be enhanced as necessary throughout the Project's detailed design, construction, and operation phases, as part of project monitoring.

While there is no single universal template, World Bank projects consistently use a structure that includes the following core components:

1. **Introduction and Objectives**
    - Purpose of the BMP
    - Project description and location
    - Overview of biodiversity values and risks
2. **Legal and Institutional Framework**
    - Relevant national and international laws, regulations, and conventions
    - Institutional responsibilities for biodiversity management
2. **Baseline Biodiversity Assessment**
    - Description of habitats (modified, natural, critical)
    - Inventory of flora and fauna, including threatened and endemic species
    - Identification of critical habitats and protected areas
2. **Impact Assessment**
    - Identification and analysis of potential direct, indirect, and cumulative impacts on biodiversity from project activities
    - Assessment of risks to ecosystem services
2. **Mitigation Hierarchy and Measures**
    - Avoidance, minimization, restoration, and offset measures
    - Specific actions to address identified impacts (e.g., afforestation, prohibition of hunting, invasive species management)
    - Biodiversity net gain strategy (if applicable)
2. **Monitoring and Reporting**
    - Biodiversity monitoring plan (indicators, frequency, methods)
    - Roles and responsibilities for monitoring
    - Reporting requirements and adaptive management procedures

2. **Stakeholder Engagement**
    - Summary of consultations with affected communities and other stakeholders
    - Integration of local knowledge and concerns
2. **Implementation Arrangements**
    - Institutional roles and capacity
    - Timeline and milestones
    - Budget and resources
2. **Annexes**
    - Maps, species lists, detailed methodologies, references

ANNEX 5: ANNOTATED OUTLINE – RESETTLEMENT PLAN (RP)

1. Description of the subproject and its potential land impacts

1.1 General description of the project and identification of the project area

1.2 Identification of potential impacts

1.2.1 Project component or activities that give rise to resettlement

1.2.2 Zone of impact of such components or activities

1.2.3 Alternatives considered to avoid or minimize resettlement

1.2.4 Mechanisms established to minimize resettlement, to the extent possible, during project implementation

2 Objectives. The main objectives of the resettlement program

3 Socio-economic studies and census of affected assets and affected livelihoods. The findings of socioeconomic studies and census to be conducted with the involvement of potentially displaced people include:

3.1 Standard characteristics of displaced households including a description of production systems, labor, and household organization; and baseline information on livelihoods (including, as relevant, production levels and income derived from both formal and informal economic activities) and standards of living (including health status) of the displaced population.

3.2 The magnitude of the expected loss—total or partial—assets, and the extent of displacement, physical or economic.

3.3 Information on vulnerable groups or persons as provided for in ESS 5

3.4 Provisions to update information on the displaced people's livelihoods and standards of living at regular intervals so that the latest information is available at the time of their displacement.

3.5 Other studies describing the following:

3.5.1 Land tenure and transfer systems, including an inventory of common property natural resources from which people deliver their livelihoods and sustenance, non-title-based usufruct systems (including fishing, or use of forest areas) governed by local recognized land allocation mechanism, and any issues raised by different tenure systems in the project area.

3.5.2 The patterns of social interaction in the affected communities, including social networks and social support systems, and how they will be affected by the project.

3.5.3 Public infrastructure and social services that will be affected.

3.5.4 Social and cultural characteristics of displaced communities, including a description of formal and informal institutions (e.g., community organizations, ritual groups, non-governmental organizations (NGOs)) that may be relevant to the consultation strategy and to designing and implementing the resettlement activities.

4 Legal and Institutional Framework.

4.1 Summary of the information included in this RPF

4.2 Local legal specificities if any

4.3 Local institutional specificities, if any

4.3.1 Identification of agencies locally responsible for resettlement activities and NGOs that may have a role in project implementation.

4.3.2 Assessment of the institutional capacity of such agencies and NGOSs

5 Eligibility and entitlements. Based on the definitions and categorization in this RPF (see entitlement matrix), definition of displaced persons and criteria for determining their eligibility for compensation and other resettlement assistance, including relevant cut-off dates.

6 Valuation of and compensation for losses. The methodology to be used in valuing losses to determine their replacement cost; and a description of the proposed types and levels of compensation under local law and such supplementary measures as are necessary to achieve replacement cost for lost assets.

7 Resettlement measures:

7.1 Description of the packages of compensation and other resettlement measures that will assist each category of eligible displaced persons to achieve the objectives of the policy (see WB requirements in ESS 5).

7.2 Site selection, site preparation, and relocation. Alternative relocation sites considered and explanation of those selected provided.

7.3 Legal arrangements for regularizing tenure and transferring titles to resettlers.

7.4 Housing, infrastructure, and social services.

7.5 Environmental protection and management.

7.6 Community participation. Involvement of resettlers and host communities.

7.7 Integration with host populations. Measures to mitigate the impact of resettlement on any host communities.

7.8 Specific assistance measures intended for vulnerable people, to be identified.

8 Grievance procedures. Based on the principal mechanisms described in this RPF, description of affordable and accessible procedures for third-party settlement of disputes arising from resettlement; such grievance mechanisms should consider the availability of judicial recourse and community and traditional dispute settlement mechanisms.

9 Organizational responsibilities. The organizational framework for implementing resettlement, including identification of agencies responsible for delivery of resettlement measures and provision of services; arrangements to ensure appropriate coordination between agencies and jurisdictions involved in implementation; and any measures (including technical assistance) needed to strengthen the implementing agencies' capacity to design and carry out resettlement activities; provisions for the transfer to local authorities or resettlers themselves of responsibility for managing facilities and services provided under the project and for transferring other such responsibilities from the resettlement implementing agencies, when appropriate.

10 Implementation schedule. Based on the template presented in the RPF, present an implementation schedule covering all resettlement activities from preparation through implementation, including target dates for the achievement of expected benefits to resettlers and hosts and terminating the various forms of assistance. The schedule should indicate how the resettlement activities are linked to the implementation of the overall project.

11 Costs and budget. Tables showing itemized cost estimates for all resettlement activities (see Section 13 of this RPF), including special assistance to vulnerable persons and other contingencies.

12 Monitoring and evaluation. Arrangements for monitoring of resettlement activities by the implementing agency, supplemented by independent monitors as considered appropriate by the Bank, to ensure complete and objective information; performance monitoring indicators to measure inputs, outputs, and outcomes for resettlement activities; involvement of the displaced persons in the monitoring process; evaluation of the impact of resettlement for a reasonable period after all resettlement and related development activities have been completed; using the results of resettlement monitoring to guide subsequent implementation.

13 Annexures to the RAP:

13.1 Annex 1: Details of all PAPs with name, ID, and type of loss (quantified)

13.2 Annex 2: Consultation details

13.3 Annex 3: Complaint form customized for the RAP

ANNEX 6: ELIGIBILITY CRITERIA AND ENTITLEMENT MATRIX

Project affected persons (PAPs), according to the World Bank's ESS5, refers to individuals or groups or entities whose property, assets, livelihood, or access to resources are negatively impacted by bank-assisted investment projects. A good knowledge of the population affected

their categories and special needs early in the planning process is critical to a successful resettlement operation.

Categories of Affected Parties

The project's resettlement process will consider different categories of affected parties based on the nature and extent of their displacement. Identifying these categories ensures that appropriate mitigation measures and entitlements are provided in accordance with the ESS5. The main categories of affected parties include:

Physically Displaced Persons: These are individuals or households who will lose their residential structures or business premises due to the project. They may be required to relocate to another location. The project will provide compensation for lost structures and support for relocation, including assistance with securing alternative housing, transportation, and transitional allowances.

Project-Affected Households: Project-Affected Households (PAHs) consist of families whose members will experience displacement, loss of assets, or disruption of livelihood activities due to project implementation. This category includes households that will lose residential structures, businesses, agricultural land, or other productive resources. The project will ensure that PAHs receive fair compensation, livelihood restoration support, and relocation assistance, where necessary, to mitigate the impacts of displacement.

Economically Displaced Persons: This category includes individuals who will experience a loss of income or livelihood due to project activities. These could be business owners, traders, farmers, or workers whose economic activities are disrupted. The project will provide livelihood restoration support, including financial compensation for lost income, vocational training, and alternative livelihood programs.

Landowners: Landowners whose properties are acquired for the project will be compensated for the loss of land based on fair market value. The Land Valuation Division of the Lands Commission will assess the value of the land, and compensation will be provided in line with national laws and World Bank resettlement policies.

Tenants and Leaseholders: Tenants occupying affected properties will also be considered in the resettlement process. The project will ensure they receive appropriate notice and assistance in securing alternative accommodation or business premises. Compensation may be provided for any investments they have made in the leased land or structures.

Vulnerable Groups: Vulnerable groups include the elderly, women-headed households, persons with disabilities, and low-income families who may be disproportionately affected by displacement. The project will implement special assistance programs, including additional support for relocation, livelihood restoration, and social services, to ensure that their needs are adequately addressed.

Encroachers and Squatters: These are individuals or groups occupying land without formal legal rights. While they may not be entitled to land compensation, the project will consider providing assistance in the form of relocation support, livelihood restoration, or other necessary measures to prevent further socio-economic hardship.

Eligibility Criteria

Once a project/subproject has been selected, defined and the detailed designs and activities have been completed, a baseline, socio-economic, census and impact study will be conducted. The census/ socioeconomic survey and impact study will be undertaken to obtain the total number, categories and needs and preferences of PAPs as part of the RP preparations process. This will inform the choice of resettlement/compensation options and help estimate compensation cost.

General Eligibility

General eligibility for compensation is determined by the cut-off date when the affected area is officially identified, and the PAPs and their assets are documented. Any person or entity who suffers loss of, or damage to an asset or loss of access to productive resources or restricted access (temporarily), as a result of the carrying out of any of the project interventions is considered eligible for compensation and/or resettlement assistance, provided the damage or loss is induced by the project and satisfies the conditions of eligibility including the cut-off date. This is consistent with the laws of Ghana and the World Bank ESS5. The following categories of persons are typically considered eligible:

1. **Affected persons with formal rights to land or assets:** These individuals or communities have formal documentation under national law that verifies their ownership or rights to land and assets. Sometimes, national law may recognize their rights even if they lack documentation. This group includes:
    a. **Landowners:** Individuals or entities or communities holding formal legal titles, customary rights, or other recognized claims to the acquired land.
    b. **Businesses:** If the project impacts their operations, formal business operators, including those operating from permanent or non-permanent structures.
2. **Affected persons without formal legal rights but with recognized or recognizable claims under national law:** These individuals may not have formal documentation, but their claims to land or assets are recognized under national law. This group typically includes:
    a. Individuals who have been using land for generations under customary or traditional tenure systems acknowledged by the community and national law.
    b. Individuals lacking formal titles due to incomplete, lost, or never-issued documents may also have claimed through adverse possession, provided they have occupied the land for a legally defined period without opposition. The following groups fall under this category:
        - Tenants/Leaseholders: Individuals or businesses renting land or property whose tenancy is legally recognized before the cut-off date.
        - Businesses: The project impacts both formal and informal business operators, including those with non-permanent structures.
        - Squatters/Informal Occupants: Individuals or groups who have established residences, businesses, or livelihoods in the project area despite lacking formal legal rights.
3. **Affected persons with no recognized legal right or claim to the land or assets they occupy or use:** This group includes individuals who lack any formal or legally recognized claim to the land. Examples include:

a. Seasonal resource users: Herders, fishers, or hunters may use the land periodically but do not have permanent rights. If their use is recognized by national law, they may fall into the first or second category.

b. Illegal occupants: Individuals occupying land in violation of applicable laws. Although they are not eligible for compensation for the land, they are entitled to resettlement assistance, livelihood support, and compensation for any assets they possess. This group includes:

    - Squatters/Informal Occupants: Individuals or groups who, despite lacking formal legal rights, have established homes, businesses, or livelihoods in the project area.

4. **Vulnerable Groups:** This category includes individuals who are particularly vulnerable to the impacts of displacement, such as women-headed households, older people, and disabled persons. These groups may receive additional support to ensure they are not disproportionately affected by the project.

From the above, individuals covered under (1) and (2) are compensated for losing land, assets, and other assistance that will restore them to their pre-project livelihood level. Persons covered under (3) are provided with resettlement assistance and livelihood restoration support in place of compensation for the land they occupy and other assistance, if necessary if they occupy the project area before the cut-off date. The cut-off date for eligibility will be the date of the project's census survey and socio-economic study in the project affected communities. See Table 13 for the different types of losses and eligible persons and/or entities.

Table 5A: Types of Losses and Eligible Persons or Entities

Type of Loss	Eligible persons/Entity
▪ Loss of Land (Urban or Rural)	▪ Various interest and rights – allodial title holder, usufruct, freeholder, leaseholder, tenant, licensees
▪ Loss of Structure	▪ Owner of structure
Business Losses ▪ Loss of business income ▪ Loss of business goodwill ▪ Loss of rent income ▪ Loss of wage income ▪ Loss of fees from trainees or apprentices	 ▪ Business owner/operator ▪ Business owner/operator ▪ Landlord/Lessor ▪ Business employees/attendants ▪ Trainer/Person offering apprenticeship job training
▪ Loss of Business, Residential or Industrial Accommodation or Room	▪ Occupier of Accommodation or Room
▪ Loss of location for temporary structure	▪ Owner of temporary structure
▪ Loss of training or apprenticeship	▪ Apprentice/Trainee
▪ Loss of economic or perennial trees ▪ Loss of food crops ▪ Loss of grazing land	▪ Various rights and interest holders – farm owner, Sharecroppers, Licensees, Lessees

Proof of Eligibility

Proof of eligibility for compensation and resettlement assistance may vary depending on the category of the PAP and the nature of their claim. The following types of proof are generally accepted:

1. **Affected persons with formal legal rights:** For affected persons/entities with formal legal rights, documents in the form of land title registration certificates, leasehold indentures, tenancy agreements, rent receipts, building and planning permits, business operating licenses, utility bills among others will be required to prove ownership or tenancy. Unprocessed/unregistered formal legal documents will not bar eligibility and procedures for confirming authenticity of such documents will be established in the Resettlement Plan.
2. **Affected persons with no formal or recognized legal rights:** Criteria for establishing non-formal, undocumented or unrecognized claims to eligibility shall be established in the Resettlement Plan paying particular attention to each situation and its peculiarities. Alternative means of proof of eligibility will include:
    i) **Customary Rights:** For individuals with customary land rights, a letter or confirmation from the local chief, traditional authority, customary heads, community elders, family heads and elders, and the general community may be required as evidence of ownership or use rights.
    ii) **Receipts or Business Licenses:** For business owners, proof of operation, such as receipts, business licenses, or documentation of their commercial activities before the cut-off date, may serve as proof of eligibility.

iii) **Community Leaders' Verification:** For squatters, informal settlers, or those without formal documentation, verification by community leaders, local government, or project teams will be used to confirm their eligibility.

Eligibility for Community Compensation

Community Eligibility: This occurs when a group of people or a collective entity qualifies for compensation, resettlement assistance, or other project-related benefits based on their shared use, ownership, or reliance on land, resources, or communal assets. Communities are eligible for compensation or resettlement assistance when their collective resources, cultural sites, or public infrastructure are affected by project activities. This may include sacred sites, common land used for grazing, water sources, or community facilities such as schools, markets, or health centers. Eligibility may also extend to communities traditionally organized under local chiefs or leaders with shared customary land rights.

- **Criteria for Community Eligibility:** A community in the project area can be considered eligible for compensation and assistance if:
- **Collective Ownership or Use**: The community has legal, customary, or recognized rights to a piece of land or resources affected by the project. This includes land held in trust by traditional authorities on behalf of the community, communal farmland, or commonly used grazing areas.
- **Public Infrastructure**: The project affects infrastructure or facilities that serve the entire community, such as schools, health clinics, markets, religious centers (e.g., mosques or churches), community roads, or water sources.
- **Cultural and Spiritual Significance**: The project impacts sites of cultural, historical, or religious importance to the community, such as shrines, groves, cemeteries, or sacred rivers.
- **Vulnerable and Marginalized Communities**: Groups traditionally marginalized or have less secure land tenure (such as peri-urban farming communities or informal settlements) rely on shared resources or communal services for their livelihoods.

These eligibility criteria ensure that all categories of PAPs are adequately identified and fairly compensated for losses sustained due to the project. The focus is on inclusivity, ensuring no affected person is excluded from compensation or resettlement benefits due to lack of formal documentation.

Entitlement Matrix

The basis of what is to be paid as compensation will be determined by identifying the most appropriate entitlement for each loss. Based on the entitlements, resettlement options would be selected in accordance with requirements of ESS5 and national laws, and the merits of the option.

Table 5C depicts the different types of entitlements proposed for each general category of PAP.

Table 5B: Types of PAPs and their Corresponding Types of Entitlement

PAP has formal legal rights to land or assets, including customary	- Payment in cash, kind, or land. - Compensation for land lost at full market price.

leaders who hold land in trust for community leaders.	- Compensation for assets constructed or developed on the affected land at full replacement cost. - Compensation is to be granted to communities where customary leaders hold the land in trust for the community members.
PAPs with customary claims of ownership or use of property recognized by community leaders (including the landless and migrants)	- Compensation for land lost at full replacement cost and other assistance will be provided. - Users are to be provided with alternative lands to use. - Compensation for assets constructed or developed on the affected land at full replacement cost.
PAPs have no recognizable legal right or claim to the land they are occupying. This includes squatters, illegal farmers/settlers.	- Resettlement or livelihood assistance should be provided for the loss of farming or grazing activities. - Full compensation is given for other improvements made to the land, such as structures. - No compensation for the affected land.
Vulnerable groups (women-headed households, elderly, disabled)	- Special assistance during compensation and resettlement processes. - Priority in compensation disbursement. - Livelihood restoration support.

Community Entitlements: Entitlements for affected community assets may include:

- Replacement of communal land or access to similar resources: The project will offer alternative land for communal use where feasible.
- Monetary compensation or community development projects: In cases where land replacement is not possible, compensation in the form of community development projects (e.g., construction of public amenities) or monetary compensation distributed among affected community members will be considered.
- Cultural or Religious Site Restoration: If cultural or religious sites are impacted, the project will support the relocation or restoration of these sites, ensuring continuity of cultural practices for the community.

An Entitlement Matrix which sets the measure for restitution or compensation for all specific categories of losses or impacts is outlined below. The Entitlement Matrix includes the unit of entitlement, type of loss/impact, criteria for eligibility and define entitlement as presented in Table 5D. The RP will have to develop additional relocation supports and LRP as this matrix is quite comprehensive but very high level and generic.

Table 5C: Entitlement Matrix

Privately Owned Land	Permanent loss of land	Landowners (with legal title or customary rights)	- Compensation at full replacement cost for the land based on market value. - Compensation for any structures or crops on the land. - Option for land-for-land compensation where feasible.

Agricultural Land	Less than 20% of landholding affected and remains economically viable	Farmer/Titleholder	- Cash compensation for affected land at full replacement value + whatever is located in these 20%.
		Tenant/Leaseholder	- Cash compensation for lost harvest or produce based on average market value over the past 3 years or remaining tenancy/lease period and any other assets and improvement made/built by the client, whichever is higher.
	More than 20% of landholding lost or land no longer viable	Farmer/Titleholder	- Land-for-land replacement where feasible, or cash compensation for entire holding. - Replacement land of equal size and productivity with secure tenure. - Relocation assistance and 12-month allowance for crops.
		Tenant/Leaseholder	- Cash compensation for average market value of produce (3 years or remaining lease, and any other assets and improvement made/built by the client, whichever is greater). - Relocation assistance and 12-month crop restoration allowance.
Commercial Land or Other Interests in Land	Partial loss of land with limited impact on business	Title holder/Business Owner	- Cash compensation at full replacement value for affected land. - Opportunity cost compensation equal to the degree of impact on the business.
		Leaseholder	- Opportunity cost compensation equal to the degree of impact on the business multiply by the unexpired term of the lease.
	Severe impact, remaining land insufficient for business	Titleholder/Business Owner	- Land-for-land replacement or cash compensation based on the PAP's choice. - Relocation assistance and compensation for 2 months of net income.
		Leaseholder	- Opportunity cost compensation equal to 2 months of net income or relocation allowance, whichever is higher. - Relocation assistance and support to secure an alternative business location.
Residential Land	Partial loss, remaining area still viable	Titleholder	- Cash compensation for affected land.

		Rental/Leaseholder	- Cash compensation equal to 10% of lease/rental fee for remaining period.
	Severe impact—remaining land not viable	Titleholder	- Land-for-land replacement or cash compensation based on PAP's choice. - Equivalent size land with secure tenure. - Relocation assistance and allowance.
		Rental/Leaseholder	- Refund of any prepaid rent beyond removal date. - Cash compensation equal to 3 months' rent. - Relocation assistance.
Religious/Cultural Land	Loss of land used for religious, cultural, or civic activities	Religious/Civic Institutions	- Replacement structure of equal or better quality. - Transportation assistance for movable items. - Consultation with community to identify alternative locations.
Buildings and Structures	Partial impact, structure remains viable	Owner	- Cash compensation for affected portion and assistance with restoration.
		Rental/Leaseholder	- Cash compensation for verified improvements by tenant. - Disturbance compensation equal to 2 months' rent.
	Severe or total impact	Owner	- Cash compensation for full structure without depreciation. - Right to salvage materials. - Relocation assistance.
		Rental/Leaseholder	- Right to salvage materials. - Relocation assistance.
		Squatter/Informal Occupant	- Cash compensation for affected structures without depreciation. - Right to salvage materials. - Relocation assistance and help to find secure alternative accommodation.
Temporary Structures	Loss of temporary structure used for business or residence	Squatter/Informal Dweller	- Relocation assistance and transportation costs. - Compensation for damaged assets.
Street Vendors (stationed within RoW)	Loss of stall or shop	Vendor (informal, no title or lease)	- Opportunity cost compensation equal to 2 months' net income or relocation allowance, whichever is higher. - Assistance to secure an alternative business site.
Standing Crops	Crops affected by permanent or temporary land acquisition	PAP (Owner, Tenant, or Squatter)	- Cash compensation based on 3-year average market value for mature/harvested crops.
Trees	Loss of trees	Titleholder	- Cash compensation based on tree type, age, and productivity.

			- Provision of seedlings or replanting assistance.
Temporary Acquisition	Temporary use of land during construction	PAP (Owner, Tenant, or Squatter)	- Cash compensation for affected assets and loss of livelihood. - Restoration of land to pre-project condition.
Natural Resources	Loss of or impeded access to natural resources (e.g., forests, grazing land)	Individuals or communities	- Access to alternative or equivalent resources maintained. - Compensation in kind (e.g., community development support).
Fishing Grounds / Coastal and Marine Resources	Temporary or permanent restriction of access to fishing grounds or marine resources due to project activities (e.g., submarine cable installation, landing sites)	Individual fishers, fishing cooperatives, coastal households	- Cash compensation for loss of fishing income based on average catch and market value for the last 3 years. - Provision of alternative or temporary fishing areas where feasible. - Livelihood restoration support (e.g., gear replacement, cold storage, or fish handling training). - Early notification of restricted zones and inclusion in planning of marine works. - Consultation with fishing associations and local coastal authorities.
	Damage to fishing gear, boats, or facilities especially during construction phase (e.g., cable laying) and maintenance and repairs	Individual fishers, cooperatives	- Full replacement or cash compensation for damaged or lost equipment (using average that is normally based on the income from the catch and not the volume. This data is captured during the socio-economic survey and compared with areas outside the project area) value. - Assistance with replacement and restoration of fishing activities.
Vulnerable Groups (Women, Elderly, Disabled)	Disproportionate impact on vulnerable individuals	Women-headed households, elderly, disabled persons	- Priority in compensation disbursement. - Home-based payment options. - Support for transportation, documentation, and new land registration. - Livelihood support or skills training.
Community Land and Forests	Loss of communal land for cultural or economic activities	Local communities	- Compensation at replacement cost. - Restoration of access to similar resources. - Culturally appropriate consultation with leaders.
Public Amenities (Schools, Clinics, etc.)	Disruption or demolition of public facilities	Local communities, service providers	- Replacement or relocation to improved standards. - Provision of temporary facilities to avoid service disruption.

Partially Damaged Permanent/Temporary Structures	Damage to structures such as tiles, concrete floors	Business owners, structure owners	- Repair or replacement of damaged properties. - Restoration to pre-impact condition.

ANNEX 7: SAMPLE ASSET VALUATION SURVEY FORM

FRAMEWORK FOR THE CENSUS OF AFFECTED ASSETS AND AFFECTED PEOPLE

A. AFFECTED PLOT OR LAND SHEET

1. Reference/GPS Coordinates:
2. Location:
    a. Region: _____
    b. District: _____
    c. Town/Community: _____
3. Surface Description
    a. Description of Soil: _____
    b. Description of Crops

	Type of Crops	Name of Owner
Perennial Crops	1.	
	2.	
Annual Crops	1.	
	2.	
Trees:	1.	
	2.	

    c. Structures: Owner: _____
    d. Channels: Owner: _____
    e. Anti-erosive structures: Owner: _____
    f. Buildings: Owner: _____
4. Users:
    a. User 1: Surface Used: Regime of tenure:
    b. User 2: Surface Used: Regime of tenure:
    c. User 3: Surface Used: Regime of tenure:
    d. User 4: Surface Used: Regime of tenure:
5. Valuation proposal (details of calculation on attached sheet):
    a. Crops
    b. Structures
6. Proposed distribution of compensation
    a. User 1:
    b. User 2:
    c. User 3:
    d. User 4:

Date:

Prepared by:

B. AFFECTED BUILDING SHEET

1. Reference/ GPS Coordinates/ Photograph Number:
2. Location:
    a. Region:
    b. District:
    c. Community/Town
3. Description:
    a. Permanent ☐ Non-Permanent ☐
    b. Surface: Number of rooms:
    c. Walls: Material condition:
    d. Roof: Material condition:
    e. Floor: Material condition:
    f. Annexes Outside: Latrine: Bathroom: Kitchen: Others:
    g. Additional features:
    h. Permanently inhabited: By: Regime of occupation:
    i. Periodically inhabited: By: Regime of occupation:
4. Valuation proposal (details of calculation on attached sheet):
5. Proposed distribution of compensation:
    a. User 1:
    b. User 2:
    c. User 3:
    d. User 4:

Date:
Prepared by:

C. AFFECTED HOUSEHOLD SHEET

1. Household Reference:
2. Location:
    a. Region:
    b. District:
    c. Community/Town
3. Photograph number for each household member:
4. Household Information:
    a. Household Head:
        i. Name:
        ii. Age:
        iii. Sex
    b. Household Members

Number	Name	Relationship with Household Head	Sex	Age

    c. Identity Document: Type: Number:
    d. Composition of Household
    e. Socioeconomic information
        i. Occupation
            1. Household Head:

FRAMEWORK FOR THE CENSUS OF AFFECTED ASSETS AND AFFECTED PEOPLE

2. Other members of Household:
    a. Number: Occupation:
    b. Number: Occupation:
ii. Total Estimated Household Cash Income:
iii. Education level of Household Members:

5. Project Impact:
    a. Assessment of the impact of the loss of the affected asset on household's livelihood:
    b. Proposed compensation or resettlement package:
        i. Household wishes
        ii. Proposed package
    c. Proposed livelihood restoration or assistance package:
        i. Household wishes
        ii. Proposed package

Date:
Prepared by:

ANNEX 8: COMPENSATION CLAIM AND COMMITMENT FORM

COMPENSATION CLAIM AND COMMITMENT FORM

Affected Person Information:

1. Name of Claimant: _____
2. Sex: _____
3. Age: _____
4. Name of representative/ contact person: _____
5. Region: _____ Town: _____ Community/Town: _____
6. Affected Property: _____
7. Total compensation due

Affected Property value (GHS)	Disturbance (GHS)	Livelihood Assistance (GHS)	Other Supplementary Assistance as necessary (GHS)	Total Compensation (GHS)

Compensation Payment Commitment:

I, ……. having received the above total compensation amount for the land required/structures/crops at the project site in question on ……. (i.e., date of compensation payment), have agreed in principle to vacate or release the said land(s), for which compensation has been paid for the crops/structures/land thereon, on……. (agreed date when PAP should vacate or release the land).

Signature or thumbprint of claimant/recipient: …… Date: ……...

Name of Administrator (DUR/Project Representative): ……

Signature of Administrator: …… Date: ……

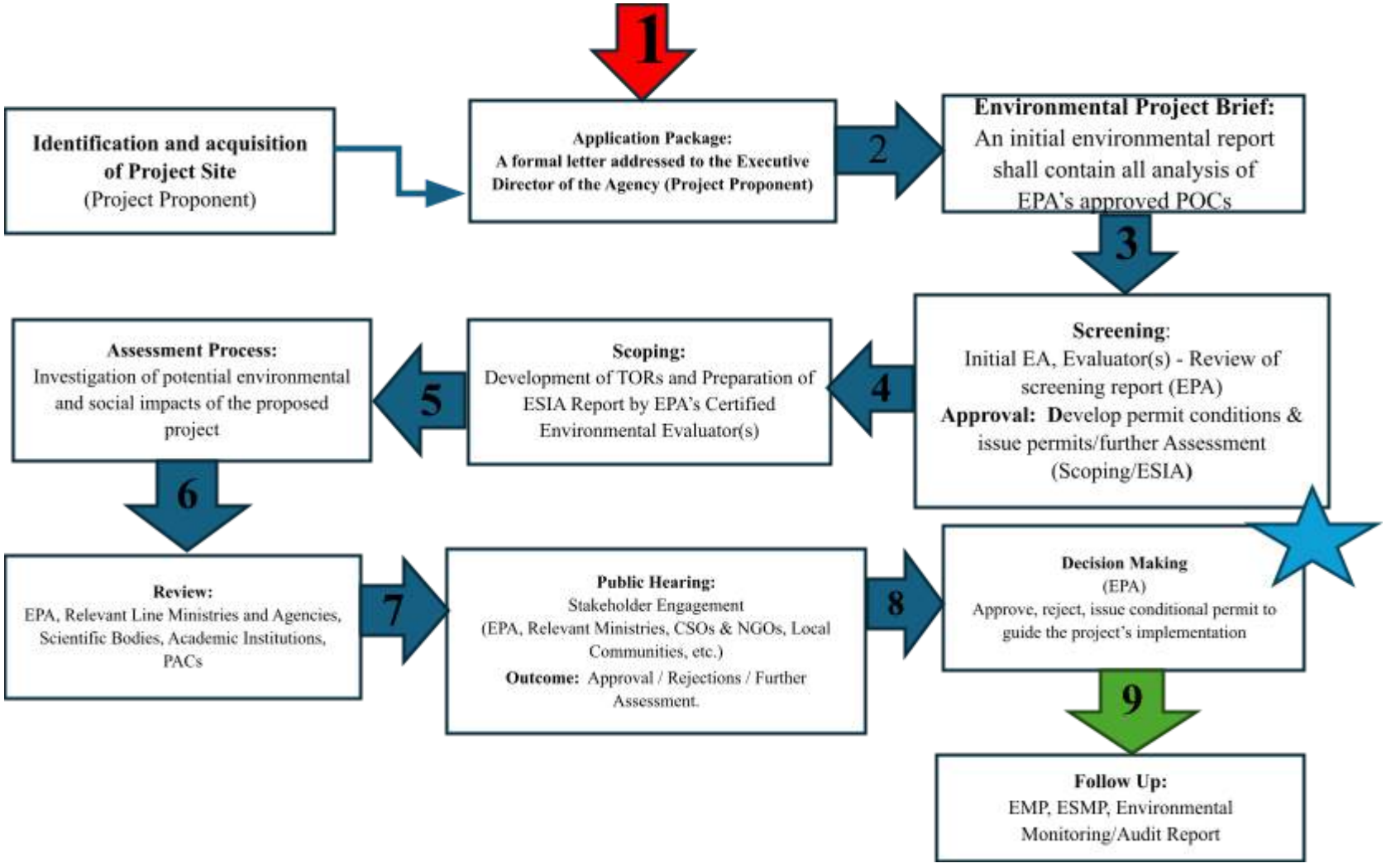
Contact of Administrator: ……

Name of Witness: ……

Signature of Witness: ……

Contact of Witness: ……

ANNEX 9: LIBERIA'S ESIA/SEA PROCESS STAGES FLOWCHART



ANNEX 10: EVIDENCE OF STAKEHOLDER CONSULTATION

Community Town Hall with Fisherfolk – conducted by the feasibility studies team

Focus Group with Women Traders - – conducted by the feasibility studies team

Traditional Leaders Consultation – conducted by the feasibility studies team

Institutional Meeting with NaFAA Officials – conducted by the feasibility studies team

Youth Engagement Forum

EPA Technical Consultation

ANNEX 11: SAMPLE GRIEVANCE COMPLAINT FORM

1. **Name of Person Raising Grievance:** (information is optional and always treated as confidential) Name: Gender: □ Male □ Female				
Address or contact information for Person Raising Grievance: (information is optional and confidential) E-mail: Phone: Address:				
Location where grievance/problem occurred (write in)				
Category of Grievance:				
☁ Environmental safeguards, social issues including gender, labour, and resettlement	☁ Grievances regarding violations of policies, guidelines, and procedures	☁ Grievances regarding contract violations	☁ Grievances regarding the misuse of funds/lack of transparency, or other financial management concerns	☁ Grievances regarding abuse of power/intervention by project or government officials
☁ Grievances regarding Project staff performance	☁ Reports of force majeure	☁ Suggestions	☁ Appreciation	
Brief Description of Grievance or Inquiry: (provide as much detail and facts as possible)				
Please include any other information that you consider relevant, other matters or facts, including supporting documents:				
Do you request that identity be kept confidential? ☁Yes ☁ No				
2. Previous Efforts to Resolve the Complaint				
3. Information on Authorised Representative. (If Authorised Representatives are not complainants themselves, their names will be disclosed as needed, to ensure transparency).				
Name	Positions/Organisations	Addresses	Contact numbers	E-mail addresses
Gender: □ Male □ Female				
Please provide evidence of the authority to represent the complainant which must include the complainant's signature.				

Do you request that identity be kept confidential?	☁ Yes	☁ No

ANNEX 12: GRIEVANCE REGISTER/LOG

Grievance Register/Log											
Grievance Id	**Date Reported**	**Name Of Grievant**	**Gender (M/F)**	**Location/ Address**	**Issue**	**Parties Involved**	**Date Investigation Was Initiated**	**Date Investigation Completed**	**Resolution / Actions Required**	**Status**	**Date Resolved**

ANNEX 13: GRIEVANCE SCREENING AND INVESTIGATION SHEET

	Grievant Information
Grievant Name	
Gender	
Location/Address	
Grievance Summary	
Who was involved? Provide names and titles. Include witnesses.	
When did it occur? Date and time	
Where did it occur? Specific locations	
What happened? Describe the event in detail. Also, describe any incidents giving rise to the grievance.	
Why is this a grievance? List all policies, procedures, and guidelines violated in the event described.	
Potential impact of human wellbeing and safety	
Potential impact on project	
What adjustment is required? Describe what must be done to correct the situation / problem.	
Additional Comments Attach Sheets, If Needed.	
Name Screening Officer	
Date Of Screening	
Grievance Category (1,2,3,4)	
Risk Ranking (HML)	
Urgency Ranking	

ANNEX 14: INCIDENT REPORTING FORM AND TYPES OF INCIDENTS TO BE REPORTED

Incident Reporting: Project-Related (Note: It is important that incidences of child abuse and sexual harassment and severe criminality / social risks that may involve Project staff are documented and brought to the attention of project implementing unit for information and determination if further investigation is needed to avoid any possible negative consequences on the Project)

1	From:	
2	Title	
3	To:	
4	Title / Organisation	
5	Date of submission:	
6	Date of re-submission	
7	Details of Incidence	
8	Incident No. (month/No) e.g., first fatal in October	
9	Nature of Incident (e.g., Multiple Fatality)	
10	Severity of incident	
11	Who is the victim?	
12	Name / Occupation of Project staff involved/suspected to be involved? (If known at this stage)	
13	Date incident happened	
14	Location of Incident	
15	Date / time incident reported to contractor / consultant	
16	Details of person(s) who reported	
17	To whom was the incident reported?	
18	Mode of Reporting (verbal/written report) – if written attach report.	
19	Details of the incident (key facts pertaining to the incident and how it happened)	
20	Who else was informed about this incident?	
21	What Action (s) has been taken by contractor / consultant to address the problem? and when?	

Indicative Incident

Environmental	Social	Occupational Health & Safety
Small-volume hydrocarbon or chemical spills	Small-scale crop damage or livestock deaths	Underuse of personal protective equipment (PPE) by Works Contractor
Localised dust, light, or noise pollution	Grievances due to Project use of public roads	Local increase in the occurrence of communicable disease

Environmental	Social	Occupational Health & Safety
Illegal hunting of wildlife (non-endangered)	Project interference with locally significant practices or sites	Minor job site injuries
Small volume sediment, pesticide, or fertiliser run-off into local waterways	Vehicle damage to public or private roads caused by Works Contractors	Poor "housekeeping" at site, e.g., littering and random disposal of solid waste
Minor off-site disposal of solid waste from Project	Nuisance-level contact between employees and the community	Lack of understandable warning or traffic control signage
Poor quality or delayed site restoration and revegetation	Minor instances of inappropriate behaviour of security forces or other Contractor personnel	Almost empty first aid kit at work site
Poorly functioning erosion-control measures	Overloading of local commercial services from the use by Project personnel	Poorly organised or sporadic health & safety induction and training
	Minor impacts on livelihood restoration and/or access to community natural resources	Multiple "slip and trip" hazards throughout the site
	Minor impacts on cultural sites/areas	Lack of Health & Safety plan and/or training for staff
	Minor social conflict related to or affecting the Project	
	Some problems with consultation/outreach about the Project	
	Delays by GM in handling/addressing grievances	

Serious Incidents

Large-volume hydrocarbon or chemical spills, or other hazardous substances impacting the environment	Widespread crop damage or livestock deaths	Injury/ies requiring off-site medical attention

Over-exploitation of local natural resources	Cases of mistreatment of communities potentially, including vulnerable groups, by Project workers or security forces, including incidents such as sexual harassment	Instances of serious communicable diseases among the workforce
Large-volume or long-term sediment, pesticide, or herbicide runoff into waterways	Significant impacts on protected physical cultural resources	Consistent lack of health & safety plans and training at work site
Medium to large-scale deforestation	Works have commenced without compensation and resettlement being completed	Chronic non-use of PPE at Project work site
Lack of implementation of agreed environmental restoration programme	Significant and repeated community impacts from Project vehicles and construction activities	Repeated non-compliance or failure to remedy non-compliance
	Lack of clarity about consultations with Peoples and broad community support for the Project	
	GM not functioning	
	Inadequate consultation and engagement of stakeholders in the Project leading to significant conflict and/or delays	
	Non-violent community protests against the Project, or mild community unrest	

Severe Incidents

Environmental	Social	Health & Safety
Hydrocarbon or chemical spills, or release of other hazardous substances into the environment, causing widespread impacts and/or requiring large-scale remediation	Forced evictions or resettlement of communities without due process or compensation	Any permanent fatality disability

Environmental	Social	Health & Safety
Poaching or hunting and trafficking of threatened or endangered species	Abuses of community members (including vulnerable groups e.g., women, children, youth, elderly, disabled/sick, LGBT) by site security forces or other Project workers, including but not limited to GBV	An outbreak of life-threatening communicable disease
Sediment, pesticide, or herbicide runoff causing permanent damage to waterways	Significant damage to nationally protected areas or to UNESCO World Heritage sites	Criminal and political attacks at worksite
Destruction of internationally recognised critical habitat	Human trafficking and child labour	Forced labour by Project's Works Contractor
Major river contamination causing decimation of fish population or other aquatic resources	Violent community protests against the Project	Works Contractor is unresponsive regarding ongoing worksite risks of bodily injury
	Significant impacts on Indigenous Peoples' land/natural resources and/or culture and there is no evidence of consultation, broad community support, mitigation of harm and/or culturally appropriate benefit-sharing	Persistent non-compliance and/or inability or unwillingness to remedy non-compliance that could result in bodily injury or harm Murders, kidnappings, manslaughter and assaults, while criminal matters and not safeguards incidents per se, have occurred in Bank Projects and should be treated as severe incidents. These incidents would be referred to local authorities with notification to WB Security

ANNEX 15: CONTRACTOR'S CODE OF CONDUCT

Preventing Gender -Based Violence (GBV) and Violence against Children (VAC)

(Name of contractor) acknowledges that adhering to environmental, social health and safety (ESHS) standards, following the project's occupational health and safety (OHS) requirements, and preventing gender-based violence (GBV) and violence against children (VAC) is important. All forms of GBV or VAC are unacceptable, be it on the work site, the work site surroundings, at worker's camps, or the surrounding communities.

The company considers that failure to follow ESHS and OHS standards, or to partake in GBV or VAC activities, constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. Prosecution of those who commit GBV, or VAC may be pursued if appropriate.

(Name of contractor) agrees that while working on the project every employee will:

- Attend and actively partake in training courses related to ESHS, OHS, HIV/AIDS, GBV and VAC as requested by employer.
- Shall wear personal protective equipment (PPE), in the correct prescribed manner, at all times when at the work site or engaged in project related activities.
- Take all practical steps to implement the organisation's environmental and social management plan (C-ESMP).
- Implement the OHS Management Plan.
- Adhere to a zero-alcohol policy during work activities, and refrain from the use of illegal substances at all times.
- Consent to a police background check.
- Treat women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behaviour towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not participate in sexual contact or activity with children—including grooming or contact through digital media. Mistaken belief regarding the age of a child is not a defence. Consent from the child is also not a defence or excuse.
- Not engage in sexual harassment—for instance, making unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct, of a sexual nature, including subtle acts of such behaviour. Ex. Looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; giving personal gifts; making comments about somebody's sex life; etc.
- Not engage in sexual favours—for instance, making promises or favourable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behaviour.

- Unless there is the full consent[14] by all parties involved, every worker shall not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered "non-consensual" within the scope of this Code.
- Consider reporting through the Grievance Mechanism or to the manager any suspected or actual GBV or VAC by a fellow worker, whether employed by my employer or not, or any breaches of this Code of Conduct.

Quality of products and services

(Name of the contractor) expects that products and services provided by each sub-Contractor will be of the highest quality and will be fairly and reasonably priced, so that (Name of the contractor) customers are served with the best value. In addition to any specific requirements in the agreement with (Name of the contractor), products and services will meet or exceed applicable government standards, including environmental and safety standards.

Health and Safety

(Name of the contractor) is dedicated to providing safe, injury-free working conditions and a healthy work environment. Compliance with this commitment is a condition of any sub-Contractor engagement with (Name of the contractor).

Workplace safety

Each Sub-Contractor is responsible for ensuring that its Representatives complete all necessary safety training and per formwork in conformance with all applicable safety rules, laws, standards and procedures and for complying with and enforcing any additional (Name of the contractor) safety policies and procedures communicated to Sub-Contractor.

Reporting injuries, damage and unsafe conditions

In addition to any other legal reporting requirements, (Name of the contractor) and each Contractor must immediately report any occupational injuries, unsafe conditions or practices and damage to property occurring as a result of the (Name of the contractor)/Sub-Contractor or its Representative's activities to DUR or any deserved entity.

Alcohol and drug use

[14] **Consent** is defined as the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defence.

(Name of the contractor)'s commitment to providing a healthy and safe working environment is compromised by the consumption of alcohol and illegal drugs. While performing work for (Name of the contractor), Employees, Sub-Contractors and Representatives must not consume, use or be impaired by alcohol or illegal drugs or be under the influence of prescription drugs that impair a person's ability to perform work in a safe and efficient manner.

Workplace violence

Acts or threats of physical violence, intimidation and harassment will not be tolerated. Engaging in violence or threatening or intimidating behaviours may result in termination of the contract with (Name of the contractor) or removal of the Representative from (Name of the contractor) property, as deemed appropriate by (Name of the contractor).

The Environment

DUR is committed to conducting its business in an environmentally responsible manner. (Name of Contractor) and Representatives will comply with all applicable environmental laws and regulations and operate in a way that minimise the negative environmental impact of the products and services.

Ethics

(Name of Contractor) must operate within the highest standards of ethical conduct when dealing with DUR employees, customers and the public. (Name of Contractor) will ensure that its actions, and those of its Representatives, comply with the letter and spirit of this Code.

Anti-corruption

(Name of contractor) and Representatives are committed to zero tolerance against corruption and shall not engage in any form of bribery, extortion, embezzlement, or other corrupt practices.

Fair competition

When conducting works (Name of Contractor) and Representatives shall uphold fair standards in recruiting and competition.

Confidentiality

Confidential information includes information that is not known by the public and that may be harmful to the organisation, its employees or its customers if disclosed. (Name of the Contractor) is committed to safeguarding and protecting its own confidential information and the personal information of its customers and employees. Sub-Contractor must maintain the confidentiality of information entrusted to it in accordance with its agreements with (Name of the Company) and applicable law. The obligation to protect (Name of the Company)'s confidential information continues even after the business relationship with (Name of the Company) ends.

Updates to Code and Disclaimer

(Name of the Contractor) reserves the right to amend and modify this Contractor Code of Conduct at its discretion. The provisions of the Code are not intended to change any obligations set forth in the Contractor's agreement with DUR and in the event of any conflict, the terms in the agreement with DUR will prevail.

ANNEX 16: INDIVIDUAL CODE OF CONDUCT IN CASE OF CONTRACTOR

Preventing Gender -Based Violence (GBV) and Violence against Children (VAC)

I, _____, acknowledge that adhering to environmental, social health and safety (ESHS) standards, following the project's occupational health and safety (OHS) requirements, and preventing gender-based violence (GBV) and violence against children (VAC) is important. All forms of GBV or VAC are unacceptable, be it on the work site, the work site surroundings, at worker's camps, or the surrounding communities.
The company considers that failure to follow ESHS and OHS standards, or to partake in GBV or VAC activities, constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. Prosecution of those who commit GBV, or VAC may be pursued if appropriate.

I agree that while working on the project I will:

- Attend and actively partake in training courses related to ESHS, OHS, HIV/AIDS, GBV and VAC as requested by my employer.
- Shall wear my personal protective equipment (PPE), in the correct prescribed manner, at all times when at the work site or engaged in project related activities.
- Take all practical steps to implement the contractor's environmental and social management plan (CESMP).
- Implement the OHS Management Plan.
- Adhere to a zero-alcohol policy during work activities, and refrain from the use of illegal substances at all times.
- Consent to a police background check.
- Treat women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behaviour towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not participate in sexual contact or activity with children—including grooming or contact through digital media. Mistaken belief regarding the age of a child is not a defence. Consent from the child is also not a defence or excuse.
- Not engage in sexual harassment—for instance, making unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct, of a sexual nature, including subtle acts of such behaviour. Ex. Looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; giving personal gifts; making comments about somebody's sex life; etc.
- Not engage in sexual favours—for instance, making promises or favourable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behaviour.

- Unless there is the full consent by all parties involved, I shall not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered "non-consensual" within the scope of this Code.
- Consider reporting through the Grievance Mechanism or to my manager any suspected or actual GBV or VAC by a fellow worker, whether employed by my employer or not, or any breaches of this Code of Conduct.

With regard to children under the age of 15:

- Wherever possible, ensure that another adult is present when working in the proximity of children.
- Not invite unaccompanied children unrelated to my family into my home, unless they are at immediate risk of injury or in physical danger.
- Not sleep close to unsupervised children unless absolutely necessary, in which case I must obtain my supervisor's permission, and ensure that another adult is present if possible.
- Use any computers, mobile phones, or video and digital cameras appropriately, and never to exploit or harass children or to access child pornography through any medium (see also "Use of children's images for work related purposes" below).
- Refrain from physical punishment or discipline of children.
- Refrain from hiring children for domestic or other labour, which is inappropriate given their age or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury.
- Comply with all relevant local legislation, including labour laws in relation to child labour.

Use of children's images for work related purposes

When photographing or filming a child for work related purposes, I must:

- Before photographing or filming a child, assess and endeavour to comply with local traditions or restrictions for reproducing personal images.
- Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film shall be used.
- Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive.
- Ensure images are honest representations of the context and the facts.
- Ensure file labels do not reveal identifying information about a child when sending images electronically.

Sanctions

I understand that if I breach this Individual Code of Conduct, my employer shall take disciplinary action which could include:

- Informal warning.
- Formal warning.
- Additional Training.
- Loss of up to one week's salary.
- Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
- Termination of employment.
- Report to the police if wanted.

I understand that it is my responsibility to ensure that the environmental, social, health and safety standards are met. That I shall adhere to the occupational health and safety management plan. That I shall avoid actions or behaviours that could be construed as GBV or VAC. Any such actions shall be a breach this Individual Code of Conduct. I do hereby acknowledge that I have read the foregoing Individual Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, GBV and VAC issues. I understand that any action inconsistent with this Individual Code of Conduct or failure to take action mandated by this Individual Code of Conduct may result in disciplinary action and may affect my ongoing employment.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

ANNEX 17: GBV/SEA/SH REPORTING FORMAT

	INCIDENT DETAILS	
1.	Type of Violation	
2.	Nature of the incident reported (What happened and by whom) - Basic facts of the incident: What, who is the incident related to the project? No in-depth details should be asked for.	
3.	Source of information	
4.	Where did the incident occur (Region, District, Community)	
5.	When did the incident occur (date and time)	
6.	Additional information (if available)	
The identity and safety of a survivor must be protected at all times. No personal data or identifying information about a survivor or their experience can be shared through this document. Personal/identifying information includes the survivor's name, perpetrator(s)' name, date of birth, home address, the exact time and place the incident took place, visible disability, residence status which can be identified in small village/community settings.		