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Liberia Urban Resilience Project (LURP)
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ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK
(ESMF)

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ABBREVIATIONS AND ACRONYMS

AFD	French Development Agency
C-ESMP	Contractor Environmental and Social Management Plan
CERC	Contingency Emergency Response Component
CHSP	Community Health and Safety Plan
COVID-19	Coronavirus Disease 2019
E&S	Environmental and Social
EPA	Environmental Protection Agency
ESF	Environmental and Social Framework
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
FA	Financing Agreement
GBV	Gender Based Violence
GBVAP	Gender Based Violence Action Plan
GM	Grievance Mechanism
GMS	Grievance Mechanism Services
H&S	Health and Safety
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IPF	Investment Project Financing
L&FS	Life and Fire Safety
LEC	Liberia Electricity Corporation
LLA	Liberia Land Authority
LMA	Liberia Market Association
LMP	Labor Management Procedures
LURP	Liberia Urban Resilience Project
LWSC	Liberia Water and Sewer Corporation
M&E	Monitoring and Evaluation
MCC	Monrovia City Corporation
MFDP	Ministry of Finance and Development Planning
MIA	Ministry of Internal Affairs
MME	Ministry of Mines & Energy
MOJ	Ministry of Justice
MOT	Ministry of Transport
MPW	Ministry of Public Works
MTR	Mid-Term Review
NBS	Nature Based Solutions
NGO	Non-Governmental Organization
NDMA	National Disaster Risk Management Agency
NHA	National Housing Authority
OHSP	Occupational Health and Safety Plan
PAP	Project Affected Person
PCC	Paynesville City Corporation
PDO	Project Development Objective
PIM	Project Implementation Manual
PMU	Project Management Unit

PPE	Personal Protective Equipment
PSC	Project Steering Committee
PTC	Project Technical Committee
PV	Photovoltaic
RP	Resettlement Plan
RF	Resettlement Framework
SEA	Sexual Exploitation Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
TOR	Terms of Reference
WB	World Bank
WMP	Waste Management Plan

EXECUTIVE SUMMARY

Background

Urban development challenges and climate risks in Greater Monrovia, and across Liberia, require an integrated approach that concurrently enable the delivery of basic services, reduce climate risks, and increase capacities for the sustainable management of urban areas. In response, this project is designed to a) mitigate climate and flood risks through structural and non-structural measures; b) provide basic services/infrastructure investments in underserved neighborhoods; and c) improve institutional capacity for urban planning and management

The project will directly contribute to the World Bank's commitment on climate financing and strengthening climate resilience. It will be specifically aligned to the Bank's climate targets for 2021-2025¹ and the Bank's climate change action plan by mainstreaming climate and disaster risk management throughout the project. This is also in line with the World Bank's Western & Central Africa Region Priorities 2021-2025² regarding increasing climate co-benefits by helping Liberia to strengthen its ability to absorb, adapt to, and transform systems in response to climate change vulnerabilities. Given the identified exposure to natural hazards, the project entails investments and activities that will directly support climate resilience, including but not limited to a) improving urban drainage services and green and grey flood risk measures to mitigate the probability and severity of floods in 2050, b) supporting the government in promoting climate-resilient urban upgrading, and c) strengthening urban planning and management to ensure that climate resilience principles are embedded in spatial plans and regulations and processes for the built environment to protect Greater Monrovia's exposure to climate risks.

ESMF STRUCTURE

This ESMF is structured as follow:

- 0) **Executive summary:** discusses significant findings and recommended actions on environmental and socio – economic issues, main environmental and socio – economic impacts and the suggested mitigation measures and states other noteworthy matters;
- 1) **Introduction:** describes the proposed project and its geographic, ecological, social, economic and cultural context, including any off-site investments such as housing, and raw material and product storage facilities).
- 2) **Policy, Legal and Institutional framework:** discusses the policy, legal, and administrative framework within which the ESMF is carried out. This will include environmental requirements of any co – financiers, identify relevant international environmental agreements to which the country is a party and relevant World Bank Environmental and Social Standards, Environment, Health and Safety Guidelines and any other requirements.
- 3) **Environmental and Social baseline information:** This section assesses and presents the dimensions of the study area by describing relevant physical, biological, and socio - economic conditions, including any changes anticipated before the project commences.
- 4) **Potential environmental and Social Risks and Impacts:** To predict and assess the project's likely positive and negative impacts, in quantitative terms to the extent possible. This is to include occupational health and safety risks in relation to all relevant activities. It also provides proposed mitigation measures.

¹ World Bank (2016): [2025 Targets to Step up Climate Action](#)

² World Bank (2021): Supporting A Resilient Recovery: The World Bank's Western and Central Africa Region Priorities 2021-2025.

- 5) **Procedure for the Management of Environmental and Social Risks and Impacts:** This section will include the mitigation measures for the ESMF implementation to ensure compliance with the ESS..
- 6) **Public Consultation and Participation:** This section will outline consultation and engagement conducted and future consultations and engagement
- 7) **Institutional and Implementation arrangements and Capacity building and training:** this section establishes a clear understanding of the institutional requirements, roles and responsibilities for adopting and implementing the ESMF. It also Outline a training and capacity building programme for the institutions responsible for implementing the ESMF.
- 8) **Conclusion and recommendations:** It provides key conclusions and recommendation for the implementation of ESMF.
- 9) **Annexes** (screening forms and sample terms of reference for site specific instruments

Project Development Objective (PDO)

The Project Development Objective (PDO) is to increase flood resilience and access to urban infrastructure in selected neighborhoods and to improve urban management in Liberia.

Project Components

The project will have the following components:

Component 1: Climate Resilient Infrastructure and Urban Upgrading (US\$30 million). This component will support comprehensive upgrading, flood risk management and improved service delivery in prioritized areas of Greater Monrovia. Investments in drainage infrastructure that improve connectivity of drainage networks are prioritized to reduce climate and flood risk. This component will finance (i) feasibility and design, (ii) consultations, (iii) environmental and social framework (ESF) studies and instruments, (iv) compensation payments for resettlement, (v) works, (vi) supervision, and (vii) servicing and maintenance contracts. A waiver for IDA payment of resettlement compensation will be proposed, based on a desk-based estimation of the compensation costs, in the absence of design footprint and site-specific Resettlement Plans (RPs).

Component 2: Strengthening Integrated Resilient Urban Development Capacity (US\$6 million). Beyond Greater Monrovia, urban centers across the country are growing rapidly, and while they do not face the same intensity of urban challenges due to their much smaller populations, support to effectively plan urban growth and associated infrastructure and service delivery needs can help these cities to avoid some of the challenges that Greater Monrovia now faces. This Component will therefore support resilient integrated spatial planning, capacity needs assessment and investment plans in Greater Monrovia, including Paynesville, as well as the next three largest cities in Liberia, Buchanan, Gbarnga and Ganta. It will also provide dedicated capacity building of municipalities and other institutions associated with resilient urban development and solid waste management. Capacity building activities are intended to contribute to better resilient planning and development control, integrating gender-informed urban design, increasing fiscal space, and improved coordination.

Component 3: Project Management (US\$4 million). This component will finance all expenses required for project management and coordination, compliance monitoring of social, environmental and safety standards, fiduciary management, and monitoring and evaluation (M&E). All operational expenses of the Project Management Unit (PMU) will be financed from this component, including external consultants to be hired as PMU staff, project vehicles, equipment, and furniture.

Component 4: Contingency Emergency Response Component (CERC) Following an eligible crisis or emergency, the Borrower may request the Bank to re-allocate project funds to support emergency

response and reconstruction. This component would draw from the uncommitted grant resources under the project from other project components to cover emergency response.

Purpose and objectives of the ESMF

Environmental and social management framework (ESMF) is an instrument that examines the risks and impacts when a project consists of a program and/or series of subprojects, and the risks and impacts cannot be determined until the program or subproject details have been identified. The use of LURP ESMF is appropriate and necessary, given that the Project consists of a number of subprojects in many different localities, and that the specific location and activities of each subproject will only be determined during implementation.

The ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts. It contains measures and plans to reduce, mitigate and/or offset adverse risks and impacts, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing project risks and impacts, including on its capacity to manage environmental and social risks and impacts. It includes adequate information on the area in which subprojects are expected to be sited, including any potential environmental and social vulnerabilities of the area; and on the potential impacts that may occur and mitigation measures that might be expected to be used.

The ESMF specifically helps to:

- Establish clear process and procedures for environmental and social assessment such as screening of sub-project activities as the first step to determine the level of assessment required, that is, ESMP, or ESIA and necessary management approaches during project implementation.
- Provide for continuous improvement and identification of potential social and environmental risks and impacts of the proposed Project.
- Ensure adherence to national, regional and international laws, policies and regulations relevant to the project.
- Specify appropriate roles and responsibilities of government departments, lead agencies and other stakeholders, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to the project subcomponents.
- Assess the GoL and PMU capacity, training and technical assistance needs to implement the provisions of the ESMF.
- Provide criteria for selection of sites for the construction activities of the projects under the program and for the design of environmental and social impact mitigation measures.
- Undertake stakeholder consultations, document issues that are raised in relation to the expansion.
- Provide recommendations on ensuring review and adherence to developed project compliance procedures, Environmental and Social Management Plan (ESMP) plans.

Methodology of ESMF Preparation

The methodology used for preparation of this ESMF includes;

- Desktop review
- Stakeholder engagement and consultations
- Meeting with affected project communities
- Preparation of Draft ESMF report

Summary of Environmental and Social Risk and Impacts

WB Environmental and Social Risk Classification (ESRC): The environmental and social risk rating for this project is **Substantial** under the World Bank ESF. This risk rating takes into consideration, amongst other things, the type of projects and nature of their activities, the sensitivity of project areas, as well as the borrower’s capacity to manage E&S risks.

Potential Environmental and Social Risks and Mitigation Strategies

Overall, the project will have positive impacts as it will: (a) improve urban drainage system with a focus on the preservation of natural environmental assets that support drainage and water retention, such as wetlands; (b) improve resilience of climate change impacts; (c) create jobs and improve livelihoods; (d) enhance institutional capacity to improve urban planning, management and service delivery; (d) contribute to women’s empowerment through prioritization of interventions and support through training.

The project’s risks and potential adverse impacts will range from low to substantial and are mostly associated with the proposed drainage interventions under Component 1.1 and rehabilitation of markets and support capacity building under Component 1.2. The risk and potential adverse impacts are mostly short-lived and localized and can be efficiently mitigated through cost effective and tested measures. These are summarized in table 1 below:

Table 1: Risk and potential adverse impacts

Project Components/ Subcomponent	Description	Proposed Menu of Investments	Potential E&S Risks and Impacts
Component 1.1.	Construction drainage mitigate climate and flood risks through structural and non-structural measures;	Civil works <ul style="list-style-type: none"> Construction of drainage systems; Rehabilitation and dredging of existing drainage; Improvements to water retention ponds and wetlands; 	Erosion of flood water receiving environment; accidents and injuries; dust; noise; vibration; waste (solid, liquid, hazardous); loss of vegetation and natural habitat; Contamination of site and surrounding area; loss of land and assets on land, trees and structures); sexual exploitation abuse & harassment (SEA/H). Child labor, forced labour, prostitutions, Labour influx, COVID-19 spread etc.
		Procurement of goods <ul style="list-style-type: none"> machinery, equipment, storage units, and transport vehicles 	Traffic safety; noise; dust/fumes; vibration; safe storage of any hazardous materials
Subcomponent 1.2.	Upgrading of markets and provide basic services/infrastructure investments in	<ul style="list-style-type: none"> Construction of a number of open market sheds and small storage facilities; 	Slips, falls, trips; noise; dust/fumes; vibration; waste generation (solid, liquid, hazardous);

Project Components/ Subcomponent	Description	Proposed Menu of Investments	Potential E&S Risks and Impacts
	underserved neighborhoods	<ul style="list-style-type: none"> • Construction of selected infrastructure that requires specialized handling for good and services; • Construction of internal market pathways, drainage infrastructure, and water and sanitation facilities. • Installation of Solar PV Systems. 	<p>accidents and injuries; SEA/SH; physical and economic displacement (e.g. temporary and permanent loss of livelihood, and assets); Child labor, forced labour, Labour influx, COVID-19 spread, soil and water contamination, community health and safety</p> <p>Poor disposal of waste from solar PV and used batteries</p> <p>Solar PV systems might overload existing electrical wiring and cause fires</p>

E&S Management and Mitigation Measures

This ESMF includes practical E&S measures to mitigate identified risks and impacts throughout the life of the project. The mitigation measures are based on the principle of the mitigation hierarchy comprising avoidance/elimination, minimization/reduction, mitigation, compensation and offsets. It is anticipated that adherence to the proposed mitigation measures will enhance social acceptability, environmental soundness, and sustainability of the project.

Screening of Sub-project Activities

Environmental and social screening marks the beginning of risk management process for any planned activity. The screening shall be initiated as early as possible along with the activity planning process after the activity is conceived. The screening of sub-projects will include a detailed screening for biodiversity impacts, to be conducted by a biodiversity specialist taking into account available studies, involving field visits and documented with supporting evidence. The extent of environmental and social assessment that might be required to be carried out in respect of a proposed activity will depend on the outcome of the screening process.

The Project Management Unit (PMU) of MPW will have E&S Specialists who will be directly responsible for carrying out preliminary screening of all sub-projects, recommend and seek advice from the World Bank and EPA on the site-specific E&S instruments to be prepared, if any, before commencement of the subproject activities. Based on the advice of the EPA and the World Bank, the PMU may prepare the following site-specific E&S instruments:

- a) Site specific Environmental and Social Management Plans (ESMPs);
- b) Site specific Environmental and Social Impact Assessments (ESIAs);
- c) Site specific Labour Management Plan (LMP)

- d) Stakeholder Engagement Plan (SEP)
- e) Gender-based Violence Action Plan
- f) Biodiversity Management Plan;
- g) Waste Management Plan (WMP)
- h) Resettlement Framework (RF)
- i) Resettlement Plans (RPs); and
- j) Environmental and Social Audit.

Procedures for E&S Assessment of Subprojects

Where it is determined that a subproject activity requires a site-specific instrument e.g., ESIA, the implementing agency (e.g., MPW/PMU) will register the undertaking with the EPA and publish a notice of intent to undertake the activity describing in a concise manner the information necessary for stakeholders or the public to identify their interest or how the project is likely to affect them. Subsequently, the implementing agency will submit a project brief to the EPA and the relevant Line Ministry will review and advise on the level of assessment required. The implementing agency will then conduct a scoping study to determine the most relevant areas or substantial matters to focus the study on and this will include the preparation of Terms of Reference (TOR) for the study. The TOR will be submitted to the World Bank for review and clearance. Following clearance of the TOR, the implementing agency may select a consultant to prepare the relevant instrument(s). The preparation of the instrument will involve meaningful consultations with relevant stakeholders. Once the instrument is prepared, the EPA and the World Bank will review and clear the instrument and it will be disclosed by the implementing agency in the country following which the World Bank will disclose it on its external website.

Institutional Arrangement, Responsibilities and Capacity

The success of the ESMF implementation depends on the clear identification and allocation of responsibilities and functions, as well as the capability of the project management team in collaboration with other agencies, to take proper actions throughout the various stages of the proposed subproject activities.

The LURP will establish a **Project Management Unit (PMU)** at the MPW to be responsible for day-to-day project implementation, coordination between all involved administrative and technical agencies, in managing and monitoring compliance with ESF requirements, including the implementation of the ESMF and other associated plans such as the ESMP, LMP, SEP, GBV Action Plan (GBVAP), Resettlement Framework and Resettlement Plans, etc.

Monitoring and Reporting

The MPW through the PMU will monitor and report on implementation of the ESMF, with inputs from the Consultants that will be supervising the subprojects. The PMU Environmental and Social ESF Standards Officers will ensure that ESF standards monitoring is included in the Project's quarterly reports to the World Bank.

The PMU will notify the World Bank of any incident or accident related to the Project, which has, or is likely to have, a significant adverse effect on the environment, the targeted communities, the public or contracted workers and consultants including security incidents, sexual exploitation and abuse and sexual harassment (SEA/SH) among others, within 48 hours after learning of the incident or accident, followed by an initial report.

Grievance Mechanism (GM)

A Grievance Mechanism (GM) is proposed as part of the Stakeholder Engagement Plan to meet the requirements of ESS10, which will provide a communication platform for hearing and addressing

issues arising from project implementation within project communities. The goal is to promote a mutually constructive relationship and enhance the achievement of project development objectives. The GM is to ensure that complaints are directed and expeditiously addressed by the relevant agencies which are to enhance responsiveness and accountability. The GM is based on the principles of (a) fairness; (b) objectivity and independence; (c) simplicity and accessibility; (d) responsiveness and efficiency; (e) speed and proportionality; and (f) participatory and social inclusion.

1.0 CHAPTER ONE: INTRODUCTION

1.1 *Description of the Project*

This Environmental and Social Management Framework (ESMF) was prepared by the Liberia Ministry of Public Works for the Liberia Urban Resilience Project (P169718) to meet the requirements of the World Bank's Environmental and Social Framework (ESF), most particularly the Environmental and Social Standard on the Assessment and Management of Environmental and Social Risks (ESS1), including the World Bank Group Environment, Health and Safety (EHS) Guidelines. The ESMF also complies with the environmental and social laws and regulations set out in the environmental and social protection legislation of Liberia.

The country consolidated peace and stability after two devastating civil wars (1989-2003) and recorded a decade of solid economic growth at an annual average growth rate of 7.4 percent during 2004-2013. However, since 2014, Liberia has endured multiple shocks including the regional outbreak of Ebola Virus Disease (EVD), and a sharp decline in global prices of the country's main exports – rubber and iron ore, which disrupted the growth trajectory and resulted in economic stagnation during 2014-2019. The Coronavirus Disease (COVID-19) pandemic further compounded Liberia's weak economic performance, causing real gross domestic product (GDP) to contract by an estimated three percent in 2020³, which stalled efforts towards job creation, reversed the declining trend in poverty reduction, constrained domestic resource mobilization, and increased Government expenditures. As at April 1, 2022, Liberia recorded 7400 cases, peaking 475 cases by mid-January 2022. A total of 294 confirmed death, with less than 10 deaths occurring in 2022 have been recorded. As of March 25, 2022, a total of 1,132,502 vaccines doses have been administered. Therefore, the project is expected to be implemented in adherence to COVID 19 prevention protocol discussed in section 0 6.8 Stakeholder Engagement Program for the LURP, given that Montserrado country reported the highest number of cases in the country.

Greater Monrovia⁴ could play an important role in supporting the economic transformation necessary for the country to recover from the COVID-19 pandemic and to build back better. The country's population is increasingly urban, with 49 percent now living in cities, projected to increase to 70 percent by 2030.⁵ Greater Monrovia is home to about 1.5 million people,⁶ a fourth of the country's total population. It is estimated that Greater Monrovia contributes between 13-19 percent of the country's GDP.⁷ The majority of Greater Monrovia's service sector employment is within the informal, low-productive and non-tradeable segments. The markets in and around Greater Monrovia are a critical part of the agriculture value chain. This suggests that Greater Monrovia could play an important role in engaging local supply chains and incentivizing local value additions within the capital area. Unlocking opportunities for agro processing industries would benefit from improved infrastructure and connectivity offered by urban densities.

Urban development challenges and climate risks in Greater Monrovia, and across Liberia require an integrated approach that concurrently enables the delivery of basic services, reduces climate risks, and

³ World Bank. (2020), Liberia Economic Update, The COVID-19 Crisis in Liberia, Projected Impact and Policy Options for Robust Recovery

⁴ Greater Monrovia in the context of this project is defined as the area encompassing the Monrovia City Corporation's and the Paynesville City Corporation's territory as well as surrounding Townships.

⁵ World Bank (2020) Greater Monrovia Urban Review

⁶ World Bank Open Data (2020): <https://data.worldbank.org/indicator/EN.URB.LCTY?locations=LR>

⁷ World Bank (2020) Greater Monrovia Urban Review

increases capacities for the sustainable management of urban areas. In response, this project is designed to a) mitigate climate and flood risks through structural and non-structural measures; b) provide basic services/infrastructure investments in underserved neighborhoods; and c) improve institutional capacity for urban planning and management.

1.2 Project Development Objective – PDO

The Project Development Objective (PDO) is to increase flood resilience and access to urban infrastructure in selected neighborhoods and to improve urban management in Liberia. To meet its development objectives, the proposed US\$40.0 million IDA Project will have four components, which are summarized below.

1.3 Project Beneficiaries

The urban population in Greater Monrovia (estimated at 1.5 million) will have access to improved urban living conditions and service delivery through interventions to improve drainage infrastructure, neighborhood upgrading, and local institutional capacity. They will not only benefit from improved flood resilience, reducing the risks of contamination and deterioration of quality of life, but also improved productivity and access to services. Through the project works and maintenance activities the project intends to use labor-intensive approaches that will maximize the number of temporary jobs created for many Liberians, providing needed livelihood support. The government at the local and central level will directly benefit from the project's capacity building and technical assistance investments for improved climate-resilient spatial planning, permitting, revenue generation, and O&M. This will include beneficiaries from LLA, LMA, MCC, MPW, NDMA, and PCC. The estimated number of government beneficiaries is 300 who will benefit directly from trainings and improved administrative processes, additional data availability, and from being directly involved with implementation of project activities and related on-the-job learning.

In terms of beneficiaries, it is estimated that at least 200,000 will benefit from avoided flooding and the neighborhood upgrading activities. This was calculated based on the current population numbers for the targeted areas and estimated as follows. The total population in the current targeted neighborhoods is around 280,000. This population is expected to either directly or indirectly benefit from the flood interventions and the neighborhood upgrading interventions in their communities either through reduced flooding of their own assets, better accessibility of roads and other services and also the community upgrading infrastructure. The proposed interventions, however, will cover primary drainage only and ii) the interventions will be designed up to certain return period. Thus, flooding will not be completely eliminated for all beneficiaries. Also, the budget for neighborhood upgrading is limited so all four neighborhoods may not be fully supported. Based on these assumptions, the number of beneficiaries has been estimated to be 70% of the total population in the target neighborhoods, around 200,000 people. It is noted that this number does not account for other beneficiaries. For instance, the frequent and widespread flooding in these areas with inaccessible roads may cause causing disruption of markets and other activities affecting visitors from outside these communities. This will affect a much larger number of people than the 200,000 beneficiaries.

1.4 Project Components Description

The project has four (4) components as discussed below:

Component 1: Climate Resilience Infrastructure and Urban Upgrading. This component will support comprehensive upgrading, flood risk management, and improved service delivery in prioritized areas of Greater Monrovia. Investments in drainage infrastructure that improve the connectivity of drainage networks are prioritized to reduce climate and flood risk. Approximately 15 percent of the budget will be used for associated neighborhood and market upgrading interventions to improve living and working conditions and access to public services. This component will finance (i) feasibility and design, (ii) consultations, (iii) environmental and social framework (ESF) studies and implementation, (iv) works, (v) supervision, and (vi) servicing and maintenance contracts.

Four key areas are being considered, based on their climate vulnerability, government priorities, economic significance, a balance between MCC and PCC, and consideration of other ongoing donor investments. The prioritization of these areas and associated investments in these areas will be confirmed through a feasibility study. The selected areas of intervention include: a) Northern Bushrod Island, including Duala market (MCC), b) Central Monrovia – Soniwein drainage system (MCC), c) Omega Market Area (PCC), and d) South Eastern Paynesville, Duport Road area (PCC). Selection criteria are based on flood risk. A feasibility study will be completed to assess the suitability of the locations and further define the scope of interventions.

Component 1 will be implemented in the Greater Monrovia area, which is shown in Map 1 below.

Map 1: Map of Greater Monrovia (Source: Cities Alliance 2017: Greater Monrovia Urban Development Strategy)



Subcomponent 1.1: Climate and Flood Risk Management Infrastructure. This subcomponent will support climate and flood risk management in prioritized areas of Greater Monrovia. It will finance the rehabilitation of existing and construction of new drainage infrastructure in selected areas. The rehabilitation of drainage systems will include the cleaning of the surface and underground channels by removal of sludge, silt, organic material, and debris, as well as the repair of surface and underground channels as needed. This will be complemented with new blue-green-grey drainage measures, including blue solutions (open water areas for temporary stormwater storage), green solutions (wetland or green vegetated areas to maintain soil infiltration and temporarily store surface stormwater), and grey solutions (traditionally constructed drainage of adequate size and design to drain roads, residential areas, and markets). The infrastructure will be designed with climate resilience in mind so that 10-year floods under the most likely 2050 climate scenario will be anticipated and designed for.

Subcomponent 1.2: Climate Resilient Community and Market Upgrading. This will finance community infrastructure investments in neighborhoods and market areas in the same locations as the drainage and water retention infrastructure. Infrastructure will be prioritized based on consultation with the community and market representatives to prioritize investments. Infrastructure investments could include improved water supply, sanitation, and waste management facilities, community halls, childcare and health facilities, cold storage facilities, and green parks and recreational spaces. The project will ensure that women are engaged in the envisaged participatory, community-led decision-making processes such that their needs and safety concerns will inform the proposed urban design and infrastructure interventions.

Across all activities, community labor will be used where possible to ensure that the improvement in physical infrastructure contributes to local job creation and community ownership. Civil works will be designed, initially, to maximize labor intensive construction to provide temporary employment to unskilled workers two objectives: (i) quick generation of employment to needy unskilled workers, and (ii) small-scale infrastructure development and maintenance.

The four potential intervention areas in Greater Monrovia under component 1 are summarized in the table below. The areas are Bushrod Island, including New Kru Town and Logan/King Peter Towns; Omega Market; Central Monrovia/CBD Soniwein Canal; and South East (SE) Paynesville / Duport Road. At this stage it is not known which of the four proposed areas will form the final project intervention areas. A feasibility and design study will be conducted to determine the final intervention sites and specific infrastructure investments. Table 2 summarizes the characteristics of the potential areas of investment and the following figures locate the four potential intervention areas on maps.

Table 2: Potential Areas of intervention and possible interventions

	Area	Urban characteristics	Physical characteristics	Drainage system	Possible structural interventions
Bushrod Island Northern Location 1:	Bushrod Island – New Kru Town	North of Freeport and west of UN Drive, dense urban footprint with mainly low-rise concrete buildings and unpaved roads,	Low-lying area bordering Atlantic Ocean, mainly rainfall	No comprehensive drainage system, only some small culverts, isolated drains;	Small green corridor to be preserved and improved; possibility of better outlet

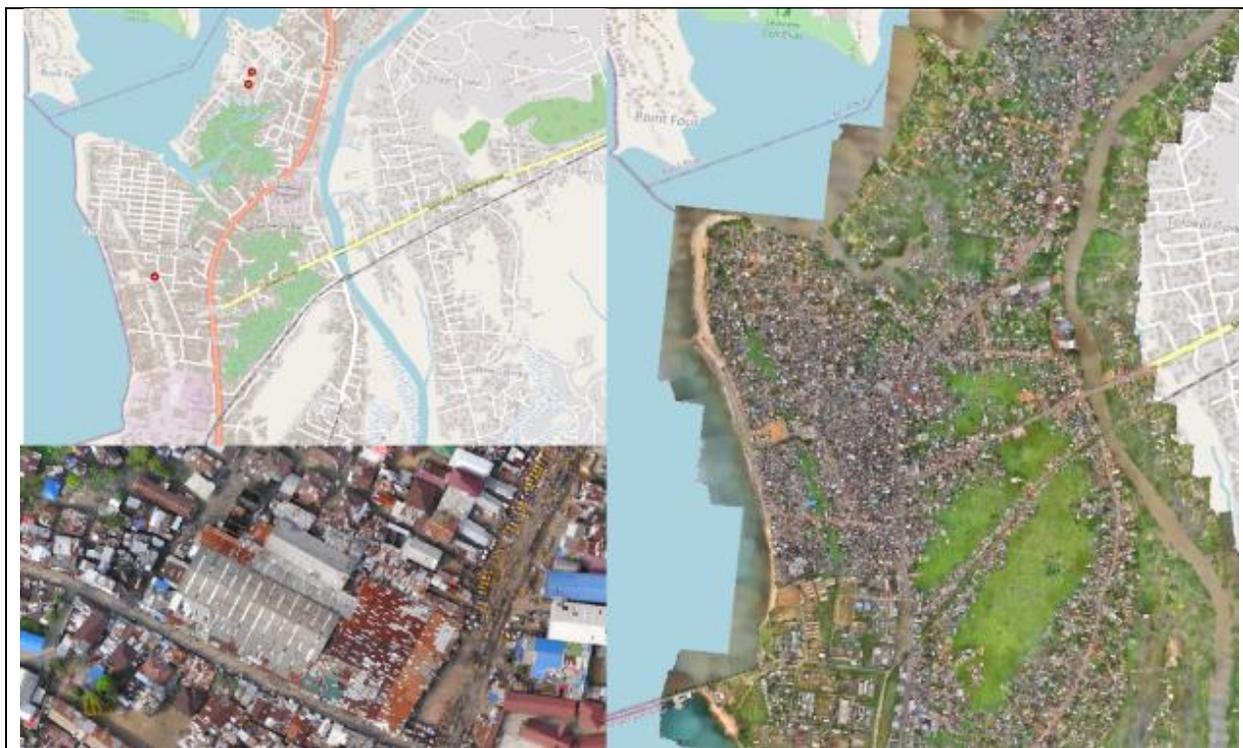
		small green corridor in the central part			
	Bushrod Island – Logan / King Peter Towns	East of UN drive and north of free port, urban footprint concentrated along main roads with green open spaces in between	Flat topography, mainly dominated by rainfall but also tidal levels in the northern part	No comprehensive drainage system, only some isolated street drains, (at least) two outlets near Duala Market and near Bong Railroad line	Green open spaces to be preserved and improved connectivity, secondary drains from urbanized areas into green spaces, extra outlet towards river
Location 2: Omega Market Area	Omega Market	Mainly open and green space with some urbanization along roads plus ongoing rapid new market development at the westside since recently	Relatively low-lying inland depression surrounded by elevated areas, purely rainfall-runoff dominated	Natural system for the most part with some small localized man-made drains	Certain percentage of open space from the entire area (preferably downstream near outlet) to be preserved for retention, comprehensive drainage system required to prevent future risk
Location 3. Central Monrovia	Central Monrovia/CBD – Soniwein Canal	City center, dense urban footprint with mixture of low and high-rise concrete buildings, mainly paved roads, shops, small markets	Large topographical variations, dominated by rainfall, quick runoff	Man-made drainage system with primary drain and secondary drains	Many small repairs required plus a few locations in which new drains could be considered, exit point near ocean could be made more natural to improved
Location 4. South Eastern Paynesville	SE Paynesville - Duport Rd	East of densely populated urbanized area with some open corridors	Relatively low-lying inland depression surrounded by elevated areas, purely rainfall-runoff dominated and draining towards southeast	No comprehensive drainage system, some culverts present and green corridors for primary drainage, and limited secondary drainage	Green corridors to be preserved/upgraded to primary drainage corridors, widening of culverts underneath road crossings, removing other blockages;

Location 1: Northern Bushrod Island. This area is under the jurisdiction of the Monrovia City Council and has the UN Drive as important transport link towards the north with the Duala Market as important economic hub. This area is densely urbanized for the most part. The topography of this area varies significantly with the urbanized areas around UN Drive/Duala Market at relatively high ground (> 4m+MSL) whereas the northeastern urbanized part and also the open and green spaces towards the east are close to 1 - 2m+MSL and just above maximum tide levels at present. The entire area is underserved regarding drainage infrastructure and frequent flooding occurs around the Duala market and in other urbanized parts mainly as a result of pluvial events. The northern and eastern part is also vulnerable to fluvial and coastal flooding. Envisioned urgent structural interventions in this area at this moment includes:

1. Road drainage along the northern part of UN Drive (currently non-existent),
2. Enhance connectivity of runoff from the urbanized areas to the low-lying and open spaces on the east part of island;
3. Preserve and connect the open greens areas as retention areas for (future) rainfall events;
4. Improve drainage connections towards the north (St Paul River mouth) and/or east (Stockton Creek).
5. Drain channels for effective runoff management within communities

The potential Northern Bushrod Island location is shown in **Error! Reference source not found.**

Figure 1: Impression of the northern part of Bushrod island based on available orthophoto imagery with Duala Market at the bottom left panel.



Location 2: Omega Market Area. This area is located under the jurisdiction of the Paynesville City Council (PCC) and the Omega Market is located at the former Paynesville Transmission Tower. This tower was

demolished in 2011 and some urban development has taken place in this area but this area still has quite some open space. The Omega Market was opened in 2016 and further expansion of the market is considered. The Omega Market area, however, faces significant flood issues during pluvial rainfall events. Based on an initial analysis of the topography and modeling, the former Transition Tower area (4 - 6 m+MSL) surrounded by relatively higher ground (10-20 m+MSL) which likely result collection of rainwater in this relatively flat area before draining further towards the southeast into the Mesurado River. Potential bottlenecks for sufficient drainage are:

- Insufficient secondary/tertiary infrastructure surrounding the built-up area including Omega Market,
- Insufficient storage/retention area,
- Insufficient conveyance capacity of the stream towards Mesurado River due to a limited and vegetated cross-section, road crossings, or a combination of the above.

Urgent envisioned interventions in this area is the implementation of a primary drainage infrastructure with a couple of collecting channels following the low-lying areas in the overall topography and connect these with retention areas at the downstream side of the Omega Ball near the existing outlet which drains towards the Mesurado River in the southeast. Also, this outlet is in need of rehabilitation and possibly widening to have sufficient capacity for the urban drainage. The potential location is shown in **Error! Reference source not found.**

Figure 2: Impression of the potential project area in Paynesville with Omega market





Location 3. Central Monrovia – Soniwein Canal. Central Monrovia serves as the primary business area of the City with existing drainage structures constructed between 1972 -78. Inadequate urbanization and facility expansion as well as poor maintenance culture have heavily influenced the poor functional state of the current drainage facilities. The main drain for the CBD is the Soniwein drainage channel. This channel commences from the top of Benson Street, Mamba Point, running through and beneath some of the principal streets of the city and discharges at the back of the BTC barracks, Buzzy Quarter Community. Visual inspection shows that this drain is mainly intact from a structural point of view, but there are at least two places along the drain that do not connect. The drainage needs large maintenance by removal of sediments and garbage. In addition to this, several drains connecting to the Soniwein drain are in need of repair/rehabilitation. The drainage situation of Central Monrovia can be further optimized by making some new connections to this main drain to relief the flood issues in certain neighborhoods. Lastly, the exit point near the ocean could be improved to create a more natural environment and improve the outflow towards the ocean. **Error! Reference source not found.** shows the potential location.

Figure 3: Soniwein Canal in Central Monrovia



Location 4. South Eastern Paynesville. Paynesville City is a fast developing metropolitan city with inadequate, and in some areas nonexistent drainage facility. It is one of the fastest developing parts of the country but lacks a clear or comprehensive layout. The Southeast of Paynesville City has seen regular flooding for some time due to pluvial activities and serves as a serious risk for communities' low lying towards the Mesurado river. The Cowfield Community / Duport Rd area east of Tubman Boulevard is a specific area of interest. This area is known for its regular flooding during rainfall events. Analysis of the topography and modeling results show that the main road (Duport Rd) is located on a higher ride (4-6m+MSL) with lower depressions at both sides. These features likely result in collection of rainwater before draining further towards the southeast into the Mesurado River. These low-lying corridors are occupied with assets and in use for agriculture. Potential bottlenecks for sufficient drainage are i) cross-roads through the low-lying green corridors with no or not sufficient drainage facilities (e.g. culverts), and ii) insufficient conveyance capacity of the streams through these green corridors towards Mesurado River due to vegetated cross-sections, and other obstacles further downstream. Restoring these green corridors and create more space for water retention and drainage are envisioned activities in this area from a drainage perspective. The location is shown in **Error! Reference source not found.**

Figure 4: Impression of the potential project area in Southeast of Paynesville near Duport Rd. With flood-prone areas around Duport Rd. (left) and existing drainage in this area



Component 2: Strengthening Integrated Resilient Urban Development Capacity (US\$6 million). Beyond Greater Monrovia, urban centers across the country are growing rapidly. While they do not face the same intensity of urban challenges due to their much smaller populations, support to effectively plan urban growth and associated infrastructure and service delivery needs can help these cities to avoid some of the challenges that Greater Monrovia now faces. This Component will therefore support resilient integrated spatial planning, capacity needs assessment and investment plans in Greater Monrovia, including Paynesville, as well as the next three largest cities in Liberia, Buchanan, Gbarnga and Ganta. It will also provide dedicated capacity building of municipalities and other institutions associated with resilient urban development and solid waste management. Capacity building activities are intended to contribute to better resilient planning and development control, integrating gender-informed urban design, increasing fiscal space, and improved coordination.

The location of the cities for component 2 is shown in figure 5.

Figure 5: Hierarchy of Cities in Liberia (Source: UN Habitat 2020)



Subcomponent 2.1: Resilient Urban Planning and Development Control. This subcomponent will finance activities to increase the capacities of relevant stakeholders to develop, maintain and update a climate resilient spatial development plan. The plan would be developed through a participatory process involving intensive stakeholder engagement, and the output would emphasize the spatial elements needed to guide climate resilient infrastructure investments and land use in Greater Monrovia and safeguarding against development on land most vulnerable to climate and flood risk. The plan will also include an infrastructure diagnostic and investment plan, including transport, drainage, ICT, water and sanitation, and market infrastructure. To oversee the development of the proposed plan, the project will finance operational expenses of a Greater Monrovia Task Force. Similar plans and task forces will be developed for Buchanan, Gbarnga and Ganta. Further, in order to connect Greater Monrovia metropolitan scale plan to local communities, this subcomponent will support the development of

detailed local area plans for at least two target neighborhoods adjacent to Component 1 infrastructure investments.

In order to support the effective implementation of such planning instruments, this subcomponent will also support an urban development control strengthening program which will (i) assess opportunities for strengthening the existing legal framework, institutional arrangements, and current practices; (ii) develop a comprehensive national training and skills development needs assessment for urban planning, management and land administration and implementation of relevant trainings, (iii) prepare development control tools, including digitization of permitting systems, and (iv) deliver targeted training to civil servants and appointed officials at the central and local government level with the possible inclusion of community-level organizations. This sub-component is being supported by a WB-executed technical assistance project conducting a Building Regulatory Capacity Assessment whose results will help to inform the design and activities under this sub-component in more detail. Ultimately, the strengthening of urban development control systems and practices, using climate risk maps to inform no-build zones, paired with a public awareness campaign on climate risks also to be supported under the program, is anticipated to contribute to a reduction of citizens settling in high climate and flood-risk zones or ecologically sensitive areas, thereby reducing climate risk in the medium to long term.

Subcomponent 2.2: Solid Waste Management Operations and Financing. To keep drainage and other hydraulic infrastructure clear of waste, allowing for the infrastructure to effectively protect against climate and flood risks, the Solid Waste Management (SWM) system, which is a core responsibility of municipal governments, needs to be drastically improved. This subcomponent will therefore finance the development of a Solid Waste Management Operational Plan for the Greater Monrovia Area that will include a detailed financial model, private sector engagement plan and inform the operational needs of the system. The plan will also lay out contractual options to combine SWM collection with regular drainage clean-up operations, since drains are acting as waste receptacles in Greater Monrovia. The strategy will build on the revenue-oriented elements of the Local Government Act and include a diagnostic and needs assessment of current local government revenue mobilization and identify an action plan to enhance revenue streams. This component will build on the achievements of the CLUS project and recent sectoral diagnostic work of Cities Alliance in close coordination with MCC and PCC. In addition, since CLUS is reaching the end of its project lifespan and resources, some activities that may not be completed under that project could be taken up, such as the feasibility, design and ESF studies for SWM facilities. Equipment and capacity development needs to enhance revenue mobilization and collection will also be supported. Similar SWM planning and capacity support will be offered to Buchanan, Gbarnga and Ganta. The sub-component will build on the technical assistance provided under the Bank Executed Pro Blue project.

Component 3: Project Management (US\$4 million). This component will finance all expenses required for project management and coordination, compliance monitoring of social, environmental, and safety standards, fiduciary management, and monitoring and evaluation (M&E). All operational expenses of the Project Management Unit (PMU) will be financed from this component, including external consultants to be hired as PMU staff, project vehicles, equipment, and furniture. The component will also finance the services of a project management consultancy firm to swiftly fill specific technical and project management needs for specific assignments. Further, the component will finance the facilitation of meetings of the Project Steering Committee (PSC) and the Project Technical Committee (PTC). Any project management, standards, fiduciary or other required meetings, consultations, and workshops will be financed under this component as well. Expenses required to establish, implement and monitor the

Grievance Mechanism (GM) and handling of complaints and all standards related concerns will be covered by this component. Finally, required studies, including a mid-term review and an implementation and completion report, will be financed to inform the M&E system of the project. All other M&E-related studies, surveys, and other expenses will be financed from this component as well.

Component 4: Contingency Emergency Response Component (CERC) (US\$0 million). Following an eligible crisis or emergency, the Borrower may request the Bank to re-allocate project funds to support emergency response and reconstruction. This component would draw from the uncommitted resources under the project from other project components to cover emergency response. A CERC annex to the Project Implementation Manual for this Component will be prepared by the Borrower and will provide detailed guidelines and instructions on how to implement the CERC, when deemed necessary, and use funds (including activation criteria, eligible expenditures, and specific implementation arrangements as well as required staffing for the Coordinating Authority).

1.5 Project Implementation Arrangements

Project Management Unit (PMU). The project will establish a PMU at MPW, which has the national mandate for major construction works and the maintenance of public infrastructure. The PMU will be responsible for day-to-day project implementation, coordination between all involved administrative and technical agencies, preparing annual work plans and budgets, preparing procurement plans and managing procurement processes, contract management, monitoring compliance with environmental and social standards, and M&E. Financial management functions will be implemented by the Public Financial Management Unit (PFMU) hosted at the Ministry of Finance and Development Planning (MFDP). The PMU will at a minimum be staffed with a Project Coordinator, two Procurement Specialists, Finance Officer, Environmental Specialist, Social Development and Gender Specialist, Communication and Community Engagement Specialist, Lead Project Engineer, Hydraulic Engineer, Urban Planner⁸, Junior Information and Digital Communications Specialist, and an Administrative Assistant as well as Drivers.

Project Steering Committee (PSC). A PSC will be established to provide strategic oversight, review annual work plans and budgets, regularly review implementation status, support in resolving policy coordination challenges throughout project implementation and ensure ownership and institutional sustainability beyond the project term. The PSC will be chaired by MFDP and MCC, Ministry of Internal Affairs (MIA) and PCC will be co-chairs. Members will be EPA, LLA, MPW, and NDMA.

Project Technical Committee (PTC). A PTC will be established to guide technical discussions and coordinate technical input to TORs, specifications, evaluation committees, and technical reviews of consultancy outputs. The PTC would ensure that technical inputs are provided in time and would regularly monitor implementation progress at the technical level. The PTC will be chaired by MPW and members will include EPA, MCC, MFDP, MIA, and PCC.

Implementing partners. The project includes several implementing partners. The governance of Greater Monrovia is divided amongst two city corporations - MCC and the PCC and ten local authorities (nine townships and one borough). Indeed, even the term “Greater Monrovia” is often contested, as it does not recognize the other local authorities within. PCC is responsible for waste management and police services within the city of Paynesville, while MCC is responsible for providing these services for the

⁸ There are very few Urban Planners in Liberia, so finding a good planner may be difficult. This role may need to be filled by an international individual or firm.

remaining jurisdictions. Several functions – including urban planning and developmental control, drainage, sanitation, electricity, and small public works – are joint with National Government entities, most notably MPW. In particular, the drainage system is managed by MPW. Other services are provided through the Liberia Water and Sewer Corporation (LWSC), Liberia Electricity Corporation (LEC), Environmental Protection Agency (EPA), National Housing Authority (NHA), National Disaster Management Agency (NDMA), LMA, LLA, and the Ministry of Transport. Capacity challenges are linked to the lack of trained and professional urban planners in Liberia. For cities outside of Greater Monrovia these conditions are exacerbated and little to no services are provided. The detailed roles and responsibilities of each of these implementing partners will be outlined in a separate Project Implementation Manual (PIM).

The implementation and management of the project’s environmental and social compliance, in adherence to the ESF, of LURP will be led by the Ministry of Public Works. This PMU environmental, social and communication specialists, with overall guidance of the coordinator shall supervise and monitor issues related to civil works and environmental and social management of the project and the contractors for effective ESMP implementation. The contractors in turn will also have a manager for Environmental, Health, Safety (EHS supervisors who will ensure ESMP implementation during implementation of different activities (including construction) and will be tasked to develop necessary detailed HSE plans as per this ESMP, and oversee their implementation. The PMU may also engage an independent organization to carry out third party environmental monitoring during project implementation.

The main responsibilities of the implementation agency, MPW through the PMU shall:

- Hire the agreed environmental and social specialists based on agreed Terms of Reference
- Define the role and responsibilities of the staffs in the project implementation of the environmental and social aspects;
- Preparation of Terms of Reference for the project incorporating the environmental issues;
- Provide suggestions in different stages of the subprojects such as: project planning, site selection, feasibility study, design and implementation;
- Evaluation of construction related environmental impacts and monitoring;
- Preparation and implementation of environmental management plans during construction and maintenance stages of the subprojects;
- Ensure incorporation of appropriate environmental specifications into the respective bidder and contract documents;
- Facilitate the appointment of appropriate environmental consultants for successful environmentally friendly implementation of the project;
- Follow up on implementation of all mitigation measures laid out management plans;
- Build capacity of project beneficiaries and stakeholders in environmental and social management;
- Conduct environmental and social monitoring of project activities at regular intervals.
- Prepare and submit periodic progress reports
- Monitoring of occupational health and safety of project workers (such as: provision of safe drinking water, sanitation, personal protective equipment etc.;
- Facilitate the carrying out participatory consultation during planning, design and implementation of the subprojects;
- Resolve grievances during the different stages of subproject implementation;

- Maintain liaison with other government and non-government organizations, development partners, stakeholders and other institutions regarding environmental and social management for efficient project implementation;
- Report accidents alongside the implementation of ESMPs

Parallel WB and AFD projects will work together under the overall umbrella of the Liberia Urban Resilience Project (LURP), using the same institutional arrangements, using a joint Project Management Unit (PMU) and the same PTC and PSC. Fiduciary as well as environmental and social standards related processes will be harmonized as needed but AFD's E&S requirements will be handled by AFD and no E&S related services related to the AFD financing have been delegated to the World Bank. A separate ESMF has been prepared by AFD for the AFD financing.

1.6 Purpose and Rationale of the ESMF

Locations and other details of the LURP subprojects are yet to be finalized at the time the project is being prepared for presentation to the Bank. In view of this, the Environmental and Social Framework (ESF) requires project impacts (environmental and social) to be assessed. However, given the nature of this project where site- and activity-specific impacts cannot be determined prior to the decision meeting, as required, a framework approach has become an acceptable way of meeting Environmental Social Impact Assessment (ESIA) requirements for project preparation and approval, and subsequently, Environmental and Social Impact Assessment/Environmental and Social Management Plans (ESIA/ESMP) will be prepared and implemented during project implementation. Environmental and social management framework (ESMF) is an instrument that examines the risks and impacts when a project consists of a program and/or series of subprojects, and the risks and impacts cannot be determined until the program or subproject details have been identified. The ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts. It contains measures and plans to reduce, mitigate and/or offset adverse risks and impacts, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing project risks and impacts, including on its capacity to manage environmental and social risks and impacts. It includes adequate information on the area in which subprojects are expected to be sited, including any potential environmental and social vulnerabilities of the area; and on the potential impacts that may occur and mitigation measures that might be expected to be used.

The preparation of site-specific plans (ESIA/ESMP) will be undertaken prior to the commencement of civil works. The Environmental and Social Management Framework (ESMF) sets out a mechanism for the assessment of the environmental and social impacts of all program sub-projects, and identifies in general the generic impacts, and proposes mitigation, monitoring and institutional measures to be taken during implementation and operation of the program to avoid, minimize or offset adverse environmental and social impacts. The ESMF also defines the procedures for conducting/preparing Environmental and Social Impact Assessments (ESIAs) and/or Environmental and Social Management Plans (ESMPs) as and when required.

1.7 Approach for the preparation of the ESMF

Environmental Assessment is multifaceted, requiring many methods and approaches. The preparation of this ESMF was based on a variety of methods as discussed subsequently.

The ESMF consists of:

2. Identification of positive and negative environment and social impacts;
3. Identification of environmental and social mitigation measures;
4. Baseline data collection on social and environmental conditions of the proposed project areas;
5. Screening procedures to be used while screening subproject activities;
6. formulation of monitoring, and environmental and social management plans; and
7. Capacity building and institutional strengthening for effective implementation of the ESMF.

Based on the information provided in the PAD, the potential environmental and social risks and impacts are likely to emerge from the following a) mitigate flood risks through structural and non-structural measures; b) provide services/infrastructure investments in underserved neighborhoods; and c) improve institutional capacity for management and development of Greater Monrovia for which standalone LMP, SEP, and Resettlement Framework, have been prepared as complimentary required instruments of the ESF for the project activities at this stage.. The infrastructure to be rehabilitated or established under the Project would incorporate design standards ensuring their resilience to the main local risk factors (geophysical conditions and climate change) and their potential for climate co-benefits (e.g., improved energy efficiency, use of renewable energy, etc.). Detailed locations of these infrastructure and their operation and management would be identified during project implementation etc. The potential impacts are reversible, minimal and can be managed through proposed cost-effective mitigation measures articulated in this ESMF and subsequently to be outlined in site-specific ESIA/ESMPs, RPs, etc.

Literature Review

All relevant available literature on the LURP was duly reviewed including the Project Appraisal Document (PAD), LURP Components, and other MPW reports. Other documents consulted include: World Bank's Environmental and Social Framework (ESF) and Environmental and Social Standards guidance documents; various National Environmental Policies, Laws and Guidelines. Among the laws reviewed were the Environmental Protection Agency Act, 2003 and the (EPML Act 2003); Environmental Protection and Management Law of Liberia. Other documents reviewed include ESMF, and ESCP documents for other WB funded projects in Liberia which include LIBRAMP and SECRAMP, etc.

Stakeholder Engagement

Various consultation meetings and discussions were held as part of project's engagement with Stakeholders who included project beneficiaries, and other relevant districts and sector's officials of major implementing partners of LURP. The preparation of this ESMF observed the ESS 10 stakeholder consultative processes and COVID-19 prevention protocols and will continue throughout LURP implementation. Project stakeholders can be categorized into:

Primary stakeholders: Individuals, groups or local communities that may be affected by the project, positively or negatively and directly or indirectly especially those who are directly affected, including those who are disadvantaged or vulnerable. The primary stakeholders identified for this project include:

- Poor and vulnerable individuals and Households
- Poor communities living in greater Monrovia areas
- Community leaders and members of poor communities

Secondary stakeholders: Broader stakeholders who may be able to influence the outcome of the project because of their mandate, relationships and knowledge about the beneficiary communities or political influence.

Discussions with stakeholders centered on experiences with other projects and LURP, concerns and recommendations, and community concerns and individual interests with regards to project implementation. A variety of stakeholders were consulted including beneficiaries (and potential beneficiaries), communities, private sector entities, contractors, service providers, government agencies and Civil Society Organizations (CSOs).

1.8 COVID-19 Response

The Technical Note produced by the WB following the pandemic “Public Consultations and Stakeholder Engagement in WB-supported operations when there are constraints of conducting public meetings” (2020), will also be used as a reference. This Technical Note makes reference to the WHO technical guidance in dealing with COVID-19, including: (i) Risk Communication and Community Engagement Action Plan Guidance Preparedness and Response; (ii) Risk Communication and Community engagement (RCCE) readiness and response; (iii) COVID-19 risk communication package for healthcare facilities; (iv) Getting your workplace ready for COVID-19; and (v) a guide to preventing and addressing social stigma associated with COVID-19.

Therefore, for the duration of the COVID 19 pandemic, prevention and control measures should be implemented in different situations in order to ensure safety of the workers, stakeholders and community members.

1.9 ESMF Disclosure

The WB ESS 10 requires that ESF Standards instruments are disclosed in country and through the World Bank external website. These reports should be made available to project affected groups, beneficiaries and the public at large. Public disclosure of ESF standards instruments such ESMF and ESMP is also a requirement of the GoL procedures. MPW will disclose this ESMF, by making copies available at its head office and at District offices and community levels. Copies will be made for easy consultations every time they are needed. Further, this ESMF and associated environmental and Social Management Plans will be disclosed at MPW websites.

Purpose of the ESMF, its disclosure, approach to preparation and ESMF structure and Institutional conditions, procedures for management of environmental and social risks and impacts during project implementation, subprojects requiring proportionate ESMPs, incorporating ESHS requirements in contracts and required protocols. Public Consultation and Participation stakeholder engagement program, GM and disclosure references and sources of information.

2.0 CHAPTER TWO: 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 compared to the World Bank Environmental and Social Framework (ESF) requirements as well as Liberian applicable laws/policies as summarized below:

2.1 Relevant National Policy Frameworks

The Constitution of Liberia 1986

The Constitution provides that, The Republic shall, consistent with the principles of individual freedom and social justice enshrined in the Constitution, manage the national economy and the natural resources of Liberia in such manner as shall ensure the maximum feasible participation of Liberian citizens under conditions of equality as to advance the general welfare of the Liberian people and economic development of Liberia.

National Environment Policy of Liberia 2003

The overall policy goal is to ensure long-term economic prosperity of Liberia through sustainable social and economic development which enhances environmental quality and resource productivity on a long-term basis that meets the requirements of the present generation without endangering the potential of future generations to meet their own needs. The policy recognizes the need for maintaining ecosystems and ecological processes essential for the functioning of the biosphere; ensuring sound management of the natural resources and the environment; adequately protecting human, flora, fauna, their biological communities and habitats against harmful impacts, and to preserve biological diversity; integrate environmental considerations in sector and socio-economic planning at all levels; throughout the nation; and seeking common solutions to environmental problems at regional and international levels.

The Specific Objectives of the policy are as follows:

- To ensure a quality environment, good health, and a decent wellbeing for all residents in Liberia.
- To use the Liberian environment in such a way that will be beneficial to the present and future generations.
- To halt and reverse the current environmental degradation, manage the ecosystems in the biosphere for the maintenance of diverse biological diversity.
- To raise public awareness and promote understanding of the essential linkages between socio-economic development and environmental protection and to ensure that environmental knowledge becomes an integral part of the education system.
- To encourage the participation of the civil society, NGOs, CBOs, and private sector in the proper management of the environment.
- To foster communal management of the environment on common or customary land.
- To enact or promulgate environmental legislation and regulatory measure, which will be complemented by social and economic incentives and institutional arrangements to influence positive environmental management.
- To establish a resource inventory and environmental accounting for accurate monitoring of the state of the Liberian environment.
- To ensure that the actual costs for environmental use and abuse are borne by the user under the user pays' and 'polluter pays' principles.

The Policy further call for the harmonization and enforcement of the environment protection and management law and the implementation of national plan; as well as provision of a coherent framework for the various policy interventions necessary to safeguard the environment.

The policy goal is to ensure long-term economic prosperity of Liberia through sustainable social and economic development, which enhances environmental quality and resource productivity on a long-term basis that meets the requirements of the present generation without endangering the potential of future generations to meet their own needs.

Land Rights Policy, 2013

The Policy provides a framework for the management of land in Liberia as follows:

Public Lands – lands designated for future use; managed in the public interest; and owned by a community and used/managed in accordance with customary practices of an area;

Government Lands: land owned by the Government and used for the buildings, projects, or activities of the Government;

Customary Lands - land owned by a community and used or managed in accordance with customary practices and norms. Customary Land rights, including the rights of ownership, use or management, are equally protected as Private Land rights, whether or not the community has self-identified, established a legal entity, or been issued a deed; and

Private Lands - land owned by an individual or private entity, in which management and use decisions are based solely on formal law, where the owner enjoys the full land rights, which include; use and possession, own natural resources on the land, and to transfer all or some of the rights through sale, lease, concession, gift, donation, will, or any other lawful means.

National Integrated Water Resource Management Policy

The WATSAN Sector Working Group and the Inter-Ministerial Technical Committee on Water and Sanitation, under the leadership of Ministry of Lands, Mines and Energy, prepared the National Integrated Water Resources Management (IWRM) Policy and validated it in 2007.

The IWRM Policy promotes a new integrated approach to managing water resources in ways that are sustainable and beneficial. The approach is based on the continued recognition of the social value of water, while at the same time giving due attention to its economic value. Integrated water resource management is a long-term process that promotes the coordinated development and management of water, land and other related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.

Although the state is the ultimate custodian of the water resources, the aim of the IWRM Policy is to achieve a public sense of resource ownership, and thus mobilize people at all levels to take responsibility for its management, protection and conservation. The policy is designed as a broad-based charter, which must be recognized by all concerned sector institutions, and taken into account by all projects and programs, including the project under consideration.

A review of the IWRM Policy has shown the proposed project is well aligned with the policy's key principles, including its prioritization of drinking water access, and emphasis on developing capacity along

with infrastructure in order to ensure operational efficiency and the financial viability of public utilities can ensure sustainability of access and water resources.

Water Supply and Sanitation Policy.

The Water Supply and Sanitation Policy is a national policy whose main objective is to provide guidance and direction in institutional, economic and legal reforms that will lead to improved water governance at national, local and community levels, and improved access to safe water supply and adequate sanitation, in an affordable, sustainable and equitable manner, to all the peoples of Liberia. In conformity with the Government's Poverty Reduction Strategy (PRS) 2008 – 2011 and the National Integrated Water Resources Management Policy, Liberia's vision of the Water Supply and Sanitation Policy shall be using clean water supply and safe sanitation as a vehicle for reducing the water supply and sanitation related disease burden, increasing productivity, promoting human welfare and setting the nation on a path towards long-term sustainable growth, development, and poverty reduction. The policy distinguishes between rural and urban areas and subsequently policy statements and strategies are enunciated in two parts: rural and urban.

Regarding rural water supply and sanitation policy statements and Strategies, the instrument aims to ensure service provision and poverty reduction. This means basic services for all; improved health through an integrated water, sanitation and hygiene promotion approach; commitment through cost sharing; service sustainability through community ownership.

Urban water supply and sanitation (WSS) policy statements and strategies cover: basic services for all; adoption of pro-poor approaches; service sustainability through full cost recovery; development of the private sector in service provision; community well-being through social and environmental considerations. Concerning the institutional framework, the policy provides for the creation of the National Water Resources and Sanitation Board.

The National Disaster Management Policy (2012)

The Policy seeks to (i) create a foundation for the development of an effective and functional legal, institutional framework and good governance for disaster risk management (DRM); (ii) provide the basis for sound DRM national and local organization, capacity enhancement and clear allocation of roles and responsibilities; (iii) provide overall direction for integrating disaster risk reduction into development, recovery and humanitarian response policy and plans; (iv) contribute to national risk management applications for sustainable national development; and (v) strengthen disaster preparedness for effective emergency and recovery response.

The policy establishes an institutional and operational framework that will drive successful implementation. Because DRR is multidisciplinary and multi-dimensional, all our development and humanitarian partners are called upon to work with Government in building national and community resilience to disasters within the context of sustainable development.

The National Energy Policy (2009)

The National Energy Policy aims to ensure universal access to modern energy services in an affordable and sustainable way. It notably encourages the production and use of renewable energy, and energy efficiency, in an effort to drive the country towards its objective of carbon neutrality by 2050.

The Policy addresses the strategic issues of access, quality, cost, and institutional framework. It facilitates and accelerates the economic transformation of rural Liberia by establishing a semi-autonomous agency dedicated to the commercial development and supply of modern energy services to rural areas with an emphasis on locally available renewable resources. The policy further facilitates the provision of an enabling legal and regulatory framework that will guarantee that an efficient operator can profitably provide affordable and environmentally friendly energy services and products of the highest quality to the whole population. It proposes the establishment of a transparent and independent regulatory process by separating the roles of policy setting, policy implementation, and policy monitoring.

The National Policy and Response Strategy on Climate Change

The Policy includes an Adaptation Policy Framework, which recognizes that there are four major principles that provide a basis from which integrated actions to adapt to climate change can be developed. These are: (i) Adaptation to short-term climate variability and extreme events to serve as a starting point for reducing vulnerability to longer-term climate change; (ii) Adaptation at different levels in society, including the local level; (iii) Adaptation policy and measures assessed in a development context; and (iv) The adaptation strategy and the stakeholder process by which it is implemented given equal importance.

Based on this framework and elements of adaptation strategy, key sectors were identified, and their corresponding adaptation policy and strategies formulated. The Policy and Response Strategy has recognized forestry and wildlife, agriculture, coastal areas, water resources, fishery, energy, mining, industry, transport, tourism, Infrastructure, urbanization and settlement, and health as priority sectors for adaptation. The policy statements for adaptation to climate change are hereunder in the summary, while their corresponding strategy elements can be referred in section 8.1 in the main body of the policy and strategy document. The Strategy highlights the importance of ensuring that infrastructure is ‘climate-proof’ and to develop a comprehensive land-use plan to achieve sustainability in urbanization and settlement developments in order to adapt to climate change.⁹

National Environmental and Occupational Health Policy, 2010

In relation to the LURP, the main objectives of the National Environmental and Occupational Health Policy is to assess the working conditions in major work places, establish data base, plan and implement workers’ wellness programs, for the purpose of protecting and promoting health in the workplace for all workers in Liberia, to provide guidelines and standards for the effective implementation and rendering of occupational health services.

Social Welfare Policy (2009)

This Social Welfare Policy is intended to provide direction for reforming the social welfare sector. Reform objectives focus on improved efficiency and effectiveness among the various actors in the sector, increased accountability and probity, and an enhanced ability to support vulnerable persons.

The vision is an improved social welfare status of the people of Liberia. The mission of the social welfare sector is to reform and reorient the social service system to enable it to provide equitable and high-quality services targeting vulnerable persons, families and communities, and strengthen modalities that enhance

⁹ Environmental Protection Agency of Liberia, 2018;
https://www.epa.gov.lr/sites/default/files/National%20Policy%20and%20Response%20Strategy%20on%20Climate%20Change%20Final%20Document-min_0.pdf

the voice of the vulnerable in defining priority needs and influencing the character and content of service delivery.

The social welfare sector commits to a process of reform and reorientation that will: a) enable better coordination of social welfare service delivery; b) strengthen the influence of vulnerable groups in decision-making in society; and c) enhance the socio-economic conditions of vulnerable groups in Liberia. Central to this is the reform of the Ministry of Health and Social Services and the reform of systems of inter-sectoral collaboration. The Social Welfare Policy focuses priority attention on: 1) sector strengthening; and 2) protecting most vulnerable groups. In the longer term, the policy emphasis is on: 1) the decentralization of social welfare services and the reinforcement of partnerships to effect this; 2) the strengthening of community social capital, and family and extended family networks; and 3) the enabling of systems and structures that allow the effective and equitable access to social welfare services among those most in need.

Short-term in this policy refers to the period 2009-2011, while long-term refers to any time thereafter. The overall intention of this Policy is to have an effective, functional and robust social welfare response in place by no later than 2025.

Gender Policy (2009)

The National Gender Policy for Liberia provides an overall context for mainstreaming a gender perspective into the national development agenda. In particular, the Policy also provides a mechanism for accountability within the Government itself and also for other stakeholders, in eliminating all forms of gender-based discrimination.

State parties who have made commitments to human rights become duty-bearers who have an obligation to meet their commitments and are accountable for progress made. All sectors need to apply a gender lens to the diagnosis of their sector. They need to consider how the achievement of gender equality supports their own sectoral objectives. They need to put in place mechanisms that ensure their interventions promote gender equality and achieve tangible results. All Ministries and Agencies need to refer to the gender-responsive elements of the conventions, treaties, conferences, MDG goals that are relevant to their sector when developing their strategies, programs, budgets, and monitoring and evaluation frameworks.

The Policy notes that factors that perpetuate GBV within the Liberian context include social, cultural, and traditional constructions that enable it to evolve and persist. Sexual violence, domestic violence, sexual exploitation and abuse, incest, early and forced marriage, wife inheritance, and FGM are the most prevalent forms of GBV in Liberia. Although most of GBV escalated during the conflict, evidence indicate that violence continues even in these times of peace. Rape and other sexual offences rank among the most common crimes reported nationwide. Although all forms of GBV need to be addressed, specific targeted action must be prioritized for sexual violence and exploitation that is perpetrated against young children, including boys. In order to build a more effective, responsive and supportive legal, social and political environment, including all aspects of protection and access to justice, health care and education, measures need to be put in place for the prevention of and response to GBV including working towards eliminating it altogether.

Solid Waste Management Policy

There is no solid waste management policy in Liberia.

Greater Monrovia Urban Development Strategy (2020)

The Greater Monrovia Urban Development Strategy covers the time period 2021-2042. The proposed 21-year transition framework envisions a society that is inclusive, resilient, economically vibrant, efficient, sustainable, connected, and integrated. Several transformative projects are identified, which include: (1) Governance: Greater Leadership and Better Systems; (2) Economy: Greater Growth and Equity; (3) Environment: Greater Green and Climate Resilience; (4) Service: Greater Reach and Quality; and (5) Citizenship: Greater Participation and Empowerment. The strategy identified specific projects for each of these areas. The strategy is however not binding and is credited to Cities Alliance and not to the government of Liberia or MCC or PCC, making its status unclear.

Liberia Urban Policy

There is currently no urban policy for Liberia as a whole. A discussion paper has been published in 2017 by UN Habitat and Cities Alliance (A National Urban Policy for Liberia – Discussion Paper) but there is no final policy yet. UN Habitat is in the process of assisting the Government of Liberia with developing the urban policy but there are no public documents available at this stage.

2.2 Liberian Legal and Regulatory Frameworks

Environmental Protection Agency (EPA) Act, 2003

The Act creates the EPA as the principal authority in Liberia for the management of the environment and shall co-ordinate, monitor, supervise and consult with relevant stakeholders on all activities in the protection of the environment and sustainable use of natural resources.

Environmental Protection and Management law, 2003

The law forms the legal framework for the sustainable development, management and protection of the environment and natural resources by the EPA in partnership with relevant ministries, autonomous agencies and organizations as well as in a close and responsive relationship with the people of Liberia. It addresses a wide range of environmental issues including EIAs amongst others in development projects.

Environmental Impact Assessment (EIA) Procedural Guidelines (2017)

In 2017, the EPA published Environmental Impact Assessment (EIA) Procedural Guidelines. The guidelines provide the EPA, sector agencies, private sector, NGOs, members of the public and consultants a set of approved guidelines for the conduct and review of EIAs in Liberia. The guidelines describe the systematic process to identify, predict and evaluate the environmental effects of proposed projects, plans or policies. These procedures establish an EIA process among others, provide enough relevant information to enable the EPA to set an appropriate level of assessment of any proposed undertaking, investment or program for the necessary review and to facilitate the decision making process for the EIA approval. The procedures comprise activities such as project Registration, preparation of project brief, Scoping, EIS preparation, and public hearing as described by the administrative flow chart in Annex 3. Sub-components 1.1, 1.2 and 2. of the project will require the preparation of EIAs.

Liberia Land Authority Act, 2016

The Liberia Land Authority presents a framework for land administration in Liberia. It focuses on the main features of good land administration and those pertaining to the identification, ownership, use, and

valuation of land, including information on all lands, as well as the identification of land and the determination of rights to the land, recording of those rights, valuation of land and the management of government and public land, coordination of land use planning, the establishment of the institutional framework at central and local government levels to carry out this mandate. The Act is relevant due to LLA's role in the process of land valuation in the context of potential resettlements/compensation.

Liberia Land Rights Act (2018)

The Land Rights Act covers the spectrum of formal land rights and responsibilities established under the law in the legal and institutional framework regulating land rights in Liberia. These include ownership and other rights in land; proof, protection, registration and regulation of land rights; ownership, acquisition and extinction of Private Land, Customary Land, Government Land, and Public Land; regulation of Protected Areas; as well as the nature, creation, and extension of leases, easements, and licenses. The law's core accomplishments include 1) the recognition of community customary land rights; 2) the bolstering of women's land rights; 3) providing numerous legally mandated mechanisms for community engagement and decision-making processes, as well as for dispute resolutions; and 4) a process that aims to offer protection for the interest of diverse land rights holders, including Tribal Certificate holders and concessionaires. The authority for implementing the law is placed on the Liberia Land Authority, as the law grants to the agency the "authority to promulgate regulations necessary for the effective implementation of this Act". The Act is relevant to the project due to potential resettlement related issues.

Decent Work Act (2015)

The Decent Work Act has the aim to protect workers' fundamental rights at work, labor institutions and administration, and contains provisions on recruitment and termination of work, minimum conditions of employment, workers' compensation, industrial relations and employment agencies. The purposes of this Act are to: continuing and further creation of quality employment; the ability of all to exercise their rights at work; a measure of social protection; participation in institutions and processes of social dialogue; ensure respect for, and the protection and fulfillment of fundamental rights at work in Liberia, including fundamental rights that are protected by the Constitution of Liberia; give effect to obligations incurred by Liberia as a member state of the International Labour Organization; establish transparent and accountable institutions and procedures of labor market governance; contribute to the enhancement of the human capabilities of all who work in Liberia; and promote economic development and growth that can be shared throughout Liberia. The Ministry of Labor published regulations in 2019 concerning employment/work permits for foreigners (Revised Regulation No. 17 Concerning Employment/Work Permits). The Act is relevant due to the civil works related activities and involved workers under the project.

General Business Law (1978)

The General Business Law standardizes weights and measures for consumer protection; deals with monopolies and restraints of trade as well as usury; entails the business registration act; standardizes the use of names and symbols; deals with concessions; includes an investment incentive code; deals with importation of cement; control of crop exportation; servicing of vehicles and machines; as well as licensed professions and occupations. Especially the latter is relevant for the project as it sets out standards for surveyors, engineers, electricians, plumbers, etc., all of which are relevant for the project activities and ESS2.

National Water, Sanitation & Hygiene Commission Act (2012)

The Act established the Liberia National Water, Sanitation & Hygiene Commission, with the mandate to promote and regulate the development, management of water, sanitation and hygiene services and serves as the principal government entity on water, sanitation and hygiene (WASH) throughout the Republic of Liberia. The functions of the Commission are, inter alia, to develop, promote and encourage a national agenda on the improvement of water, sanitation and hygiene services for the health, growth and development of the people of Liberia; build the capacity of local communities on sanitation and hygiene as a priority for sustainable livelihood; and to provide standards, guidelines and recommendation to municipal and local authorities on the disposal of waste and other hazardous substances that affect the quality of water and sanitation. The Act is relevant for the project with regard to neighborhood upgrading activities.

Executive Order Number 92 on Domestic Violence (2018)

The Executive Order defines domestic violence terms and outlines domestic violence offenses. Grading of offenses, as well as punishment, rehabilitation, fines and consent in relation to domestic violence offenses. Finally, the Executive Order provides for criminal charges and protection measures and duties of police officers in this context. The Executive Order is of relevance to the project due to the project related SEA/SH risks.

2.3 Institutional Framework

Monrovia City Corporation (MCC)

The Monrovia City Corporation (MCC) provides oversight regulation and is responsible for waste management within the municipality. MCC staff will be engaging during the implementation of the ESMF and site-specific instruments since major infrastructure activities will be implemented within PCC's jurisdiction.

Paynesville City Corporation (PCC)

The Paynesville City Corporation (PCC) is responsible for waste management and police services within the city of Paynesville, which forms part of Greater Monrovia. PCC staff will be engaging during the implementation of the ESMF and site-specific instruments since major infrastructure activities will be implemented within PCC's jurisdiction.

Liberia Water & Sewer Corporation (LWSC)

The Liberia Water and Sewer Corporation (LWSC) LWSC is the owner of the constructed water supply facilities and is responsible for the sustainability and the overall operation and maintenance of the system. LWSC will provide fundamental data for assessing site-specific risks that may related to WASH aspects.

Liberia Land Authority (LLA)

The Liberia Land Authority (LLA) is a product of the policy, legal and institutional reform of the land sector of Liberia led by the Erstwhile Land Commission. The LLA, established by an Act of the National Legislature on October 6, 2016, as an autonomous agency of the Government with operational independence, subsumes land functions that were performed by several agencies of the Government, including the key land administration agencies - Department of Lands, Survey and Cartography of the former Ministry of Lands, Mines and Energy (MLME), now the Ministry of Mines and Energy, the Deeds and Titles Registry of the Center for National Documents Records Agency (CNDRA), and functions of County Land

Commissioners from the Ministry of Internal Affairs. The LLA will play a key role during compensation and resettlement related aspects of the ESMF due to its mandate with regard to valuation of lands.

Liberia Electricity Corporation (LEC)

The Liberia Electricity Corporation (LEC) is a Public Corporation owned solely by the Government of Liberia (GOL), with the mandate to produce, transmit and sell economic and reliable electric power to the entire nation. LEC will play a role during ESMF implementation by providing data on electricity lines prior to commencement of upgrading works.

Liberia National Disaster Management Agency (NDMA)

The Liberia National Disaster Management Agency with the purpose of implementing the National Disaster Management Policy, coordinating the national disaster management system incorporating state and non-state actors at national, county, district and chiefdom levels, and handling disaster-related issues to ensure reduced vulnerabilities to natural and human induced hazards. NDMA will play a role during ESMF implementation by providing relevant disaster risk related data to MPW and other stakeholders that will implement flood risk mitigation related activities.

The Liberia Marketing Association (LMA)

The Liberia Marketing Association (LMA) is responsible for the collection of market fees and waste management in market areas. Especially in Greater Monrovia, the LMA will be key for the implementation of the ESMF. The LMA will be instrumental in coordinating consultations with marketers that are fundamental for discussing potential market upgrading activities.

Ministry of Finance and Development Planning (MFDP)

The Ministry of Finance & Development Planning (MFDP) will sign off on a Grant Agreement and oversee financial management services through its Project Financial Management Unit (PFMU). As a signatory to the financing agreement, MFDP will sign on behalf of government the project's related E&S commitments.

The MFDP leads the implementation of the National Development programs and coordinates multilateral funding support to the Government of Liberia (GoL). The ministry is the principal authority on fiscal and development planning and executing agency of GoL development programs from the fiscal standpoint.

The MFDP houses the Project Financial Management Unit (PFMU), which is responsible for fiduciary management of World Bank-supported projects. It will support LURP to prepare a consolidated work plan and budget for the project on an annual basis, including any potential costs related to compensation/resettlement as part of the ESMF.

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:

- Provision of advice, technical services, planning, design, and construction of works projects for other Government Departments and Agencies.
- Management of works and maintenance programs associated with public buildings, roads, bridges, airfields, jetties, water supplies, sewerage, and rural electricity; and

- Maintenance and operation of facilities owned by the Government.

MPW will host the Project Management Unit (PMU), which will be responsible for implementing and monitoring the ESMF and site-specific instruments.

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 Committees at the community, 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. LGAs such as MCC and PCC will be crucial for implementing the ESMF and site-specific instruments since the main infrastructure activities will be implemented within their jurisdiction.

Environmental Protection Agency (EPA)

In support of the establishment of the EPA, the EPA Act (GoL, 2003a) also established County and District Level environmental committees, responsible for the local delivery of national environmental policy and priorities. In a move towards a more bottom-up approach, a key function of the committees is to articulate local level environmental issues to the EPA who in turn are charged with formulating and passing on a relevant response for local level implementation.

In addition, under Section 20 and 21 of the EPA Act (GoL, 2003a), the EPA is mandated to appoint environmental inspectors within the counties to monitor the implementation of environmental standards as established under the EPML (GoL, 2003b). The power of these inspectors is wide ranging but with specific reference to LURP, they are well placed to play oversight role on matters of compliance of project activities with EPA and GoL environmental and social requirements.

2.4 Relevant International Conventions

The United Nations Convention on Biological Diversity

Liberia ratified the United Nations Convention on Biological Diversity on 8 November 2000 with the realization that it is the best international instrument to address conservation of biological diversity and sustainable use of its components.

The Convention on Biological Diversity provides a comprehensive framework for stopping biodiversity loss. It is a carefully balanced, legally binding international treaty that commits Parties to the triple objective outlined below: a) The conservation of biological diversity; b) The sustainable use of its components; and c) The fair and equitable sharing of benefits arising from the utilization of genetic resources.

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

The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty negotiated at the United Nations Conference on Environment and Development

(UNCED), informally known as the Earth Summit, held in Rio de Janeiro from 3 to 14 June 1992. The objective of the treaty is to "stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". With respect to national resource conservation, Article 4(1.d) of the convention requires all Parties to the conventions, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, to "Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems".

Liberia ratified the United Nations Framework Convention on Climate Change (UNFCCC) in November 2002 and implemented an 18-month National Adaptation Programme of Action (NAPA) project in 2004. The national greenhouse gas (GHG) inventory report of Liberia has been prepared as part of Liberia's Initial National Communication (INC), fulfilling its mandatory obligation as a non-Annex I party to the UNFCCC in accordance with Article 4, paragraph 1(a), and Article 12, paragraph 1(a) of the Convention.

International Labour Organisation (ILO) Conventions

The ILO Governing Body has identified eight "fundamental" Conventions, covering subjects that are considered to be fundamental principles and rights at work: freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labour; the effective abolition of child labour; and the elimination of discrimination in respect of employment and occupation. Liberia has ratified 6 out of the 8 fundamental ILO conventions, which include the Forced Labour Convention; Freedom of Association and the Protection of the Rights to Organise Convention; Right to Organise and Collective Bargaining Convention; Discrimination (Employment and Occupation) Convention; and Worst Forms of Child Labour Convention. The two conventions that are not ratified are the Equal Remuneration Convention and the Minimum Age Convention.

The Ramsar Convention, 1971

Liberia is signatory to the Ramsar Convention. Although the project will not directly affect a Ramsar sites , the subprojects occur adjacent to wetlands declared as Ramsar sites and the project has ensured the mitigation measures reduce the impact on these sites. The Convention's mission is the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world. The Convention uses a broad definition of wetlands including all lakes and rivers, underground aquifers, swamps and marshes, wet grasslands, peatlands, oases, estuaries, deltas and tidal flats, mangroves and other coastal areas, coral reefs, and all human-made sites such as fishponds, rice paddies, reservoirs and salt pans. Under the "three pillars" of the Convention, the Contracting Parties commit to:

- work towards the wise use of all their wetlands;
- designate suitable wetlands for the list of Wetlands of International Importance (the "Ramsar List") and ensure their effective management;
- Cooperate internationally on transboundary wetlands, shared wetland systems and shared species.

2.5 World Bank Requirements

2.5.1 World Bank Environmental and Social Framework

The World Bank Environmental and Social Framework (ESF) sets out the World Bank's Commitment to sustainable development. It includes a set of ten Environmental and Social Standards that establish the mandatory requirements that the borrower must meet through the project life cycle:

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

The standards establish objectives and requirements to avoid, minimize, reduce and mitigate environmental and social risks and impacts, and to compensate for or offset any residual impacts.

In the context of LURP, MPW shall address the Project's environmental and social risks as part of the environmental and social assessment process, in accordance with ESS1. ESS2–10 set out the obligations of LURP in identifying and addressing environmental and social risks and impacts that may require particular attention. All ESSs apart from ESS9 (Financial Intermediaries) were deemed relevant to the Project by the World Bank.

2.5.2 Environmental and Social Risk Classification

The World Bank classifies all projects into one of four classifications: High Risk, Substantial Risk, Moderate Risk or Low Risk. This classification takes into account relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the Recipient to manage the environmental and social risks and impacts in a manner consistent with the ESSs.

Other areas of risk may also be relevant to the delivery of environmental and social mitigation measures and outcomes, depending on the specific project and the context in which it is being developed. These could include legal and institutional considerations; the nature of the mitigation and technology being proposed; governance structures and legislation; and considerations relating to stability, conflict or security.

The World Bank has classified both the environmental and social risks of LURP as *substantial*, and takes into consideration, amongst other things, the type of project and nature of its activities, the sensitivity of project areas as well as the borrower's capacity to manage E&S risks.

The WB will review the risk classification on a regular basis during implementation, and will change the classification where necessary, to ensure that it continues to be appropriate. Any change to the classification will be disclosed on the World Bank's website.

2.5.3 Environmental and Social Commitment Plan (ESCP)

LURP has developed and will implement an Environmental and Social Commitment Plan (ESCP), which sets out the measures and actions required for the project to achieve compliance with the ESSs over a specific timeframe. The ESCP will be agreed with the World Bank and disclosed before project appraisal and will form part of the legal agreement. The ESCP may be revised periodically to address issues that arise during implementation.

2.5.4 Labor Management Procedures

Under ESS2 on Labor and Working Conditions, MPW is required to develop labor management procedures (LMP) for LURP. The LMP will be prepared as a standalone document according to the established template.

The purpose of the LMP is to facilitate planning and implementation of the project. The LMP identifies the main labor requirements and risks associated with the Project, and help the project determine the resources necessary to address Project labor issues. The LMP is a living document, which is initiated early in project preparation, and is reviewed and updated throughout the development and implementation of the project.

A concise and up to date LMP will enable different project-related parties, for example, staff of the implementing unit, contractors and sub-contractors and project workers, to have a clear understanding of what is required on a specific labor issue. The level of detail contained in the LMP will depend on the type of project and information available. Where relevant information is not available, this should be noted and the LMP should be updated as soon as possible.

In preparing and updating the LMP, the Recipient refers to the requirements of national law and ESS2 and the Guidance Note to ESS2.

2.5.5 Environment, Health and Safety Guidelines

The ESF also requires all projects to apply the relevant requirements of the World Bank Group Environmental, Health and Safety Guidelines (EHSGs)¹⁰, especially the General Guidelines. In the context of LURP, MPW will also use the EHS Guidelines on Water and Sanitation¹¹ and Construction Materials Extraction¹². The General Guidelines cover environmental, occupational health and safety, and community health and safety related risks. Section 1.6 of the General Guidelines covers Waste Management. These are technical reference documents, with general and industry specific examples of

¹⁰ A complete list of industry-sector guidelines can be found at:

www.ifc.org/ifcext/enviro.nsf/Content/EnvironmentalGuidelines

¹¹ <https://www.ifc.org/wps/wcm/connect/e22c050048855ae0875cd76a6515bb18/Final%2B-%2BWater%2Band%2BSanitation.pdf?MOD=AJPERES>

¹² <https://www.ifc.org/wps/wcm/connect/dad17995-66be-4280-86da-b438cf9fbefc/Final%2B-%2BConstruction%2BMaterials%2BExtraction.pdf?MOD=AJPERES&CVID=jkC-EN.&id=1323162191491>

Good International Industry Practice (GIIP). They define acceptable pollution prevention and abatement measures and emission levels in World Bank financed projects. The Construction Materials Extraction contains information relevant to construction materials extraction activities such as aggregates, limestone, slates, sand, gravel, clay, gypsum, feldspar, silica sands, and quartzite, as well as to the extraction of dimension stone.

The EHSGs contain the performance levels and measures that are normally acceptable and applicable to projects. If less stringent levels or measures than those provided in the EHSGs are appropriate in view of the financial constraints or other specific subproject circumstances, the World Bank will require LURP to provide full and detailed justification for any proposed alternatives through the environmental and social assessment of the subproject. This justification must demonstrate, to the satisfaction of the World Bank, that the choice of any alternative performance level is consistent with the objectives of the ESSs and the applicable EHSGs, and is unlikely to result in any significant environmental or social harm.

- The WBG General Environmental Health and Safety (EHS) Guidelines and
- EHS Guideline on Construction Materials Extraction.

2.5.6 Stakeholder Engagement and Information Disclosure

ESS10 requires that the project implement a Stakeholder Engagement Plan (SEP) proportionate to the nature and scale of the project and its potential risks and impacts. The MPW, in consultation with the World Bank, developed a SEP that it will disclose prior to Project appraisal as a standalone document. As described in paragraphs 14-16 of ESS10, the SEP must:

- Describe the timing and methods of engagement with stakeholders throughout the life cycle of the project, distinguishing between project-affected parties and other interested parties.
- Describe the range and timing of information to be communicated to project-affected parties and other interested parties, as well as the type of information to be sought from them.
- Take into account the main characteristics and interests of the stakeholders, and the different levels of engagement and consultation that will be appropriate for different stakeholders.
- Set out how communication with stakeholders will be handled throughout project preparation and implementation.
- Describe the measures that will be used to remove obstacles to participation, and how the views of differently affected groups will be captured. Where applicable, the SEP will include differentiated measures to allow the effective participation of those identified as disadvantaged or vulnerable. Dedicated approaches and an increased level of resources may be needed for communication with such differently affected groups so that they can obtain the information they need regarding the issues that will potentially affect them.

2.5.7 Grievance Mechanism

As required by ESS10, the project has prepared, will disclose before Project appraisal and will implement a Grievance Mechanism (GM) as part of the SEP to receive and facilitate resolution of concerns and grievances of project-affected parties related to the environmental and social performance of the project in a timely manner.

The GM is required by ESS10 and must be proportionate to the potential risks and impacts of the project and will be accessible and inclusive. Where feasible and suitable for the project, the GM will utilize existing formal or informal GM, supplemented as needed with project-specific arrangements.

- The GM is expected to address concerns promptly and effectively, in a transparent manner that is culturally appropriate and readily accessible to all project-affected parties, at no cost and without retribution. The mechanism, process or procedure will not prevent access to judicial or administrative remedies. The Borrower will inform the project-affected parties about the grievance process in the course of its community engagement activities, and will make publicly available a record documenting the responses to all grievances received
- Handling of grievances will be done in a culturally appropriate manner and be discreet, objective, sensitive and responsive to the needs and concerns of the project-affected parties. The mechanism will also allow for anonymous complaints to be raised and addressed.

2.5.8 Contingent Emergency Response Components (CERC)¹³

The World Bank requires all activities financed through the CERC to meet ESF requirements, keeping in mind that this requirement only applies during implementation of the CERC, if deemed relevant. CERC activities will rely as much as possible on the Project’s environmental and social instruments.

If the CERC is activated, the World Bank will advise the Project on the following elements:

- Confirming which activities can proceed on the basis of the provisions of the CERC-ESMF, with no additional environmental or social assessment, and which ones require assessment (and at what level) prior to being initiated.
- Rapidly assessing the environmental and social baseline of the planned CERC activities and locations based on readily available information.
- Determining the sequencing and implementation plan for:
 - Mobilizing technical assistance and funding to prepare any additional safeguard instruments, e.g., Environmental and Social Management Plans, Resettlement Plans, etc.
 - Preparing the environmental and social risk management instruments and carrying out their Bank review, revisions, clearance, and approval.
 - Consultations and disclosure.
 - Establishing roles and responsibilities for ESF standards implementation, and monitoring.
 - Estimating the costs for the preparation and implementation of the instruments.

In the event that CERC activities exceed the scope of the original PDO and thus this ESMF, the Project might be called on to prepare a supplemental CERC-ESMF as part of an eventual Project restructuring. The CERC-ESMF would include a screening process for the potential activities, the institutional arrangements for environmental and social due diligence and monitoring, any needed capacity-building measures, and generic guidance on emergency small-scale civil works. It would also indicate which kinds of emergency response actions can proceed with no additional environmental or social assessment, and which ones would require assessment (and at what level) prior to being initiated. It may also identify trade-offs, where required short-term responses could create longer-term risks that need to be managed.

Given the uncertainties and rapid changes inherent in emergency situations and responses, the CERC-ESMF would be built around a flexible, “adaptive management” approach, i.e., with emphasis on monitoring of key outcomes and mechanisms to feed information rapidly and effectively into decision-making and management.

¹³ This section is based on Paragraphs 17 of the World Bank Guidance on Contingent Emergency Response Components (CERC) (16 October 2017)

The Project will use the same institutional framework and the same screening process and criteria for the CERC as for the other Project components.

2.6 Environmental Quality Standards/Regulations

2.6.1 Ambient Air Quality Guidelines

In the absence any local standards for ambient air monitoring, the WHO guideline values adopted by IFC are applicable to the project. Table 3 shows the WHO Ambient Air Quality Guidelines.

Table 3: WHO Ambient Air Quality Guidelines

WHO Ambient Air Quality Guidelines ¹⁴		
	Averaging Period	Guideline value in mg/m ³ ¹⁵
Sulfur dioxide (SO ₂)	24-hour	125 (Interim target-1) 50 (Interim target-2) 20 (guideline)
	10 minute	500 (guideline)
Nitrogen dioxide (NO ₂)	1-year	40 (guideline)
	1-hour	200 (guideline)
Particulate Matter PM ₁₀	1-year	70 (Interim target-1) 50 (Interim target-2) 30 (Interim target-3) 20 (guideline)
	24-hour	150 (Interim target-1) 100 (Interim target-2) 75 (Interim target-3) 50 (guideline)
Particulate Matter PM _{2.5}	1-year	35 (Interim target-1) 25 (Interim target-2) 15 (Interim target-3) 10 (guideline)
	24-hour	75 (Interim target-1) 50 (Interim target-2) 37.5 (Interim target-3) 25 (guideline)
Ozone	8-hour daily maximum	160 (Interim target-1) 100 (guideline)

¹⁴ World Health Organization (WHO). Air Quality Guidelines Global Update, 2005. PM 24-hour value is the 99th percentile

¹⁵ Interim targets are provided in recognition of the need for a staged approach to achieving the recommended guidelines.

2.6.2 Wastewater Quality Guidelines

The IFC indicative values for treated sanitary discharges may be a guide for the project but will not be applicable to the project. Table 4 shows the Indicative Values for Treated Sanitary Sewage Discharge.

Table 4: Indicative Values for Treated Sanitary Sewage Discharges

Indicative Values for Treated Sanitary Sewage Discharges		
Pollutants	Units	Guideline Value
pH	pH	6 – 9
BOD	mg/l	30
COD	mg/l	125
Total nitrogen	mg/l	10
Total phosphorus	mg/l	2
Oil and grease	mg/l	10
Total suspended solids	mg/l	50
Total coliform bacteria	MPN ^b / 100 ml	400 ^a
Notes: ^a Not applicable to centralized, municipal, wastewater treatment systems which are included in EHS Guidelines for Water and Sanitation. ^b MPN = Most Probable Number		

2.6.3 Ambient Noise Quality

The IFC indicative Noise Level will be applicable to the project. The table 5 below shows the Noise Level. Noise impacts should not exceed the levels presented in Table 5 or result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site.

Table 5: Noise Level Guidelines

Applicable Noise Guidelines		
Receptor	One Hour L _{Aeq} (dBA)	
	Daytime 07:00 - 22:00	Nighttime 22:00 - 07:00
Residential; institutional; educational ¹⁶	55	45
Industrial; commercial	70	70

¹⁶ For acceptable indoor noise levels for residential, institutional, and educational settings refer to WHO (1999).

2.7 Assessment of Gaps between World Bank's Environmental and Social Framework and Local legislation

The ESMF must be consistent with the World Bank's Environment and Social Framework, Liberian laws, and international conventions ratified or recognized by the Government of Liberia. The ESSs of the ESF are compared to domestic and national legislation and gaps identified in Table 6: Gap Analysis between World Bank ESS and Liberian legislation below:

Table 6: Gap Analysis between World Bank ESS and Liberian legislation

ESSESS Objectives	Applicable local legislation	Addressing gaps
<p>Assessment & Management of Environmental & Social Risks and Impacts</p> <p><i>Identify, evaluate and manage the environment and social risks and impacts of the project in a manner consistent with the ESSs.</i></p> <p>ESS1 requires that borrowers identify and manage environmental and social risks associated with a project, including through conducting an environmental and social assessment during the project preparation stage. Establishes a mitigation hierarchy which instructs borrowers first to anticipate and avoid risks and impacts; then to minimize or reduce risks and impacts to acceptable levels; then once risks and impacts have been minimized or reduced, mitigate; and finally, where significant residual impacts remain, compensate for or offset them. Instructs borrowers to ensure that project negative impacts do not fall disproportionately on those who might be disadvantaged or vulnerable, and to ensure that all groups have access to project benefits.</p>	<p>Environment Protection Agency Liberia Law 2002</p> <p>An Act to establish a monitoring, coordinating and supervisory authority for the sustainable management of the environment in partnership with regulated Ministries and organizations and in a close and responsive relationship with the people of Liberia; and to provide high quality information and advice on the state of the environment and for matters connected therewith. It provides for a wide-ranging responsibility for environmental management by the EPA. One of the most prominent issues is the need for development of administrative procedures for the preparation of EIA to ensure effective environmental governance. The required administrative procedures and how they are arranged to reflect the intent of the law is the subject of the following guidelines.</p> <p>Environmental Impact Assessment Procedural Guidelines, 2006</p> <p>It provides guidance on the EIA process and has been evident since the establishment of the EPA. It sets out the processes and</p>	<p>The EPA Act caters for identifying and managing Environmental and Social risks broadly and adequately. Where there are gaps relating to pollution standards and guidelines, those relating to ESS 1 will be adopted and are presented in 2.7 above. EPA’s EIA Process allows for adopting higher standards</p> <p>Part 5, Section 37 of the EPA Act:</p> <p>or conduct a project or activity for which an environmental impact assessment is required unless an environmental impact assessment has been concluded and an environmental regulation made there under</p>

ESSESS Objectives	Applicable local legislation	Addressing gaps
	procedures from applying for EIA to the EPA to the issuance of environmental permit.	
<p><i>To adopt a mitigation hierarchy approach to anticipate and avoid risks and impacts;</i></p> <p><i>Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels;</i></p> <p><i>Once risks and impacts have been minimized or reduced, mitigate;</i></p> <p><i>Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.</i></p>	<p>Liberia EPA Act has no equivalent to the mitigation hierarchy.</p> <p>National law gives priority to the principle of environmental protection and pollution prevention, and not only to the mitigation or compensation of impacts. All new projects must carry out EIAs to prevent adverse impact and must obtain an environmental permit. No project or new structure that could harm, pollute or deteriorate the environment and natural resources is allowed and all new projects should use best available practices for clean production and apply environment protection/pollution prevention measures.</p>	LURP will apply the ESF
<p><i>To adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and they are not disadvantaged in sharing development benefits and opportunities resulting from the project.</i></p>	Included in the EPA Act and regulations	<p>National requirements and ESF objectives are aligned and complement each other.</p> <p>LURP will apply both ESF and national requirements</p>
<p><i>To utilize national environmental and social institutions, systems, laws, regulations and procedures in the assessment, development</i></p>	The EPA Act 2003 specifies the procedures and process of undertaking ESIA	LURP will take into account national laws and regulations when applying the ESF requirements

ESSESS Objectives	Applicable local legislation	Addressing gaps
<i>and implementation of projects, whenever appropriate.</i>		
<i>To promote improved environmental and social performance, in ways which recognize and enhance Borrower capacity</i>	Included in the EPA Act and regulations	LURP will take into account national laws and regulations when applying the ESF requirements
<p>Labor & Working Conditions</p> <p><i>To promote safety and health at work.</i></p> <p>ESS2 requires that borrowers ensure safe labor and working conditions in Bank-financed projects. Prohibits the use of forced or child labor in Bank-financed projects. Borrowers must provide a grievance mechanism for project workers, including sub-contracted workers.</p> <p>The requirements are guided in part by a number of international conventions negotiated through the International Labour Organization (ILO) and the United Nations (UN). The specific objectives are: To promote the fair treatment, non-discrimination, and equal opportunity of workers. To establish, maintain, and improve the worker- management relationship. To promote compliance with national employment and labour laws. To protect workers, including vulnerable categories of workers such as children, migrant workers, workers engaged by third</p>	<p>Labor Laws of Liberia</p> <p>Decent Work Act of Liberia, 2015</p> <p>Provide a synopsis of applicable labor laws, occupational health and safety, conditions of service, contract etc.</p>	<p>Although some labor laws are old and outdated, existing labor laws have been applied to the project that are in line with requirements for ESS2. These will be acceptable to the Government of Liberia as the country also subscribes in principle to many of the labor laws of the ILO and the UN and many of the international Human Rights Laws. Contractors will also be required to adopt many of the practical aspects of ESS2 implementation through stipulated requirements specified in the ESMPs and Contractor Labor Management Procedure.</p>

ESSESS Objectives	Applicable local legislation	Addressing gaps
<p>parties, and to promote safe and healthy working conditions, and the health of workers. To avoid the use of forced labour.</p>		
<p>Resource Efficiency and Pollution Prevention and Management</p> <p>ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services, and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations. At the same time, more efficient and effective resource use, pollution prevention, and GHG emission</p>	<p>Environment Protection and Management Law of Liberia, 2002</p> <p>EIA Procedural Guidelines, 2006</p> <p>Sets out the processes and procedures involve in the conduct of Environment and Social Impact Assessment</p>	<p>Although there are gaps with ESS 3 and national regulations such as the EPML, management measures are also been sourced from ESS3. These measures will be acceptable to the Government of Liberia. Contractors will be required to adopt industry specific guideline to promote and support sustainable use of natural resources and complement them with appropriately developed modern technologies.</p>
<p>Community Health and Safety</p> <p>ESS4 addresses the health, safety, and security risks and impacts on project-affected communities</p> <p>and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with</p> <p>particular attention to people who, because of their particular circumstances, may be</p>	<p>New Public Health Law of Liberia, Title 33, (2019)</p>	<p>It is therefore the obligation of the Liberian government to create and promote safety policies aimed at protecting workers from workplace injuries, death, and other associated illnesses. Environmental health and safety management is an important component of a safe work environment because it protects human health and safety in the workplace.</p> <p>In cases where the New Public Health Law does not address an issue, the relevant provisions of</p>

ESSESS Objectives	Applicable local legislation	Addressing gaps
<p>vulnerable. It recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impact and must be eliminated, prevented, mitigated or reduced</p>		<p>ESS4 will be adopted which is allowable under the Liberian Governance system</p>
<p>Land Acquisition, Restrictions on Land Use and Involuntary Resettlement</p> <p>ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition¹ or restrictions on land use² may cause physical displacement (relocation, loss of residential land, or loss of shelter), economic displacement (loss of land, assets, or access to assets leading to loss of income sources or other means of livelihood),³ or both. The term “involuntary resettlement” refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land</p>	<p>Land Rights Act, 2018</p> <p>The Act establishes four basic types of rights: Public Land, Government Land, Customary Land, and Private Land. In addition, a Protected Area is land which may fall under the Government Land, Customary Land, or Private Land categories but which must be conserved for the benefit of all Liberians.</p> <p>Environmental Protection and Management Law of Liberia, 2002, spells out the consultative processes and procedures involved in consulted project-affected communities for the purpose of land acquisition</p> <p>Environmental Protection and Management Law of Liberia, 2002</p> <p>EIA Procedural Guidelines, 2006</p>	<p>Other than the EPML and the 2018 Land Rights Act, Liberia does not have a prescriptive guideline that addresses the conduct of resettlement during the implementation of project activities. In such instances, ESS5 will be adopted.</p>

ESSESS Objectives	Applicable local legislation	Addressing gaps
acquisition or restrictions on land use that result in displacement.	Sets out the processes and procedures involve in the conduct of Environment and Social Impact Assessment	
<p>Biodiversity Conservation and Sustainable Management of Living Natural Resources ESS6 recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development. Biodiversity is defined as the variability among living organisms from all sources, including inter alia, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems. Biodiversity often underpins ecosystem services valued by humans. Impacts on biodiversity can therefore often adversely affect the delivery of ecosystem services.</p>	<p>National Biodiversity Strategic Action Plan of Liberia, 2017</p> <p>The Strategy considers key issues identified by stakeholders critical for biodiversity conservation and provides strategic direction to enhance biodiversity management.</p>	<p>ESS6 will be adopted to ensure the sustainable management of Living Natural Resources as the National Biodiversity Action Plan only addresses conservation of biological diversity and not sustainable use of resources.</p>
<p>Cultural Heritage</p> <p>ESS8 recognizes that cultural heritage provides continuity in tangible and intangible forms between</p>	No Applicable National Regulations	Absent existing national regulations on Cultural Heritage, ESS8 will be adopted for implementation throughout the project.

ESSESS Objectives	Applicable local legislation	Addressing gaps
<p>the past, present, and future. People identify with cultural heritage as a reflection and expression of their constantly evolving values, beliefs, knowledge, and traditions. Cultural heritage, in its many manifestations, is important as a source of valuable scientific and historical information, as an economic and social asset for development, and as an integral part of people’s cultural identity and practice.</p> <p>ESS8 sets out measures designed to protect cultural heritage throughout the project life cycle. It also spells out sets out general provisions on risks and impacts to cultural heritage from project activities.</p> <p>ESS7 sets out additional requirements for cultural heritage in the context of Indigenous Peoples. ESS6 recognizes the social and cultural values of biodiversity. Provisions on Stakeholder Engagement and Information Disclosure are set out in ESS10.</p>		
<p>Stakeholders’ Engagement and Information Disclosure</p>	<p>Environmental Protection and Management Law, 2002 - The EPML provides the legal basis on which stakeholders shall be</p>	<p>The EPML do not required the preparation of a Stakeholders’ Engagement Plan (SEP). The</p>

ESSESS Objectives	Applicable local legislation	Addressing gaps
<p>ESS10 recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive, and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management, and monitoring of the project's environmental and social risks and impacts.</p>	<p>consulted during and throughout the project life cycle.</p> <p>EIA Procedural Guidelines,2006, sets out the procedures involved in conducting stakeholder's consultation during the conduct of an Environmental and Social Impact Assessment</p>	<p>project has adopted and prepared a SEP as part of the compliance process to ESS10.</p>

3.0 CHAPTER THREE: ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS

The LURP infrastructure interventions will target Greater Monrovia and its environs, Montserrado. The environmental and socio-economic conditions in this county are discussed and will, in many areas, provide a basis for predicting impacts of the project. Technical assistance and capacity building activities under component 2 will in addition target the three largest cities after Greater Monrovia, including Ganta, Gbarnga, and Buchanan.

3.1 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 111,369km², 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 km², extending 370.4 km (200 nautical mi) seaward from shore.

Liberia 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.

Greater Monrovia consists of the Monrovia City Corporation (MCC) and the Paynesville City Corporation (PCC) - and ten local authorities (nine townships and one borough). See chapter 1 for the specific location.

Monrovia lies on a peninsula, between the Atlantic Ocean and the Mesurado River and is a major port. The city is almost completely surrounded by the St. Paul River. Monrovia is located at 6°19'N 10°48'W.

Project locations for component 2 include Gbarnga, Ganta and Buchanan. See chapter 1 for a map of the specific locations.

Across Greater Monrovia, the project selected areas of intervention include: a) Northern Bushrod Island, including Duala market (MCC), b) Central Monrovia – Soniwein drainage system (MCC), b) Omega Market Area (PCC), and d) South Eastern Paynesville, Duport Road area (PCC).

Northern Bushrod Island. This area is under the jurisdiction of the Monrovia City Council and has the UN Drive as important transport link towards the north with the Duala Market as important economic hub. This area is densely urbanized for the most part. The topography of this area varies significantly with the urbanized areas around UN Drive/Duala Market at relatively high ground (> 4m+MSL) whereas the northeastern urbanized part and also the open and green spaces towards the east are close to 1 - 2m+MSL and just above maximum tide levels at present. The entire area is underserved regarding drainage infrastructure and frequent flooding occurs around the Duala market and in other urbanized parts mainly as a result of pluvial events. The northern and eastern part is also vulnerable to fluvial and coastal flooding.

Omega Market Area. This area is located under the jurisdiction of the Paynesville City Council (PCC) and the Omega Market is located at the former Paynesville Transmission Tower. This tower was demolished in 2011 and some urban development has taken place in this area but this area still has quite some open space. The Omega Market was opened in 2016 and further expansion of the market is considered. The Omega Market area, however, faces significant flood issues during pluvial rainfall events. Based on an initial analysis of the topography and modeling, the former Transition Tower area (4 - 6 m+MSL) surrounded by relatively higher ground (10-20 m+MSL) which likely result collection of rainwater in this

relatively flat area before draining further towards the southeast into the Mesurado River. Potential bottlenecks for sufficient drainage are:

- Insufficient secondary/tertiary infrastructure surrounding the built-up area including Omega Market,
- Insufficient storage/retention area,
- Insufficient conveyance capacity of the stream towards Mesurado River due to a limited and vegetated cross-section, road crossings, or a combination of the above.

Central Monrovia – Soniwein Canal. Central Monrovia serves as the primary business area of the City with existing drainage structures constructed between 1972 -78. Inadequate urbanization and facility expansion as well as poor maintenance culture have heavily influenced the poor functional state of the current drainage facilities. The main drain for the CBD is the Soniwein drainage channel. This channel commences from the top of Benson Street, Mamba Point, running through and beneath some of the principal streets of the city and discharges at the back of the BTC barracks, Buzzy Quarter Community. Visual inspection shows that this drain is mainly intact from a structural point of view, but there are at least two places along the drain that do not connect. The drainage needs large maintenance by removal of sediments and garbage. In addition to this, several drains connecting to the Soniwein drain are in need of repair/rehabilitation. The drainage situation of Central Monrovia can be further optimized by making some new connections to this main drain to relief the flood issues in certain neighborhoods. Lastly, the exit point near the ocean could be improved to create a more natural environment and improve the outflow towards the ocean.

South Eastern Paynesville. Paynesville City is a fast developing metropolitan city with inadequate, and in some areas nonexistent drainage facility. It is one of the fastest developing parts of the country but lacks a clear or comprehensive layout. The Southeast of Paynesville City has seen regular flooding for some time due to pluvial activities and serves as a serious risk for communities' low lying towards the Mesurado river. The Cowfield Community / Duport Rd area east of Tubman Boulevard is a specific area of interest. This area is known for its regular flooding during rainfall events. Analysis of the topography and modeling results show that the main road (Duport Rd) is located on a higher ride (4-6m+MSL) with lower depressions at both sides. These features likely result in collection of rainwater before draining further towards the southeast into the Mesurado River. These low-lying corridors are occupied with assets and in use for agriculture. Potential bottlenecks for sufficient drainage are i) cross-roads through the low-lying green corridors with no or not sufficient drainage facilities (e.g. culverts), and ii) insufficient conveyance capacity of the streams through these green corridors towards Mesurado River due to vegetated cross-sections, and other obstacles further downstream. Restoring these green corridors and create more space for water retention and drainage are envisioned activities in this area from a drainage perspective.

3.2 Land Cover and Vegetation

Monrovia and its environs are the most urbanized locations in Liberia. The area is cleared of significant vegetations, except for isolated trees and shrubs. Separating the City of Monrovia from the City of Paynesville and surrounding suburbs is a land area covered with water and a marshland, the Mesurado River and wetland. The land rea of the project area is shown in Figure 6 below.

3.3 Physiography

Liberia has four topographical regions at different altitudes, each with distinct physical features. Along the sea coast is the coastal plain of 560km covering Montserrado. 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.

Greater Monrovia has varying altitudes, the highest in Central Monrovia. The area is bordered by the Atlantic Ocean at the south-east and includes a portion of the Montserrado Wetlands that extends in the west. Significant portion of Monrovia comprises of diabase dikes. This accounts for the high elevation in the city, including the formation of Cape Mesurado. The City of Paynesville and most of the surrounding environs are comprised of fluvial and beach sands. The terrain has very low relief, about 6 meters above sea level.

3.4 Soil

There are four 4 main Liberian soil types. The soils range from weakly developed muds and hydromorphic clays along the coast. There are inland swamps, to shallow soils on the plateaus. The soil patterns are determined by differences in age, parent material, physiography, and present and past climatic conditions. The marshland region of Monrovia comprises mostly hydromorphic clays and deltaic peat. Paynesville and the surrounding comprise mostly of sandy soil.

3.5 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.

3.5.1 Rivers

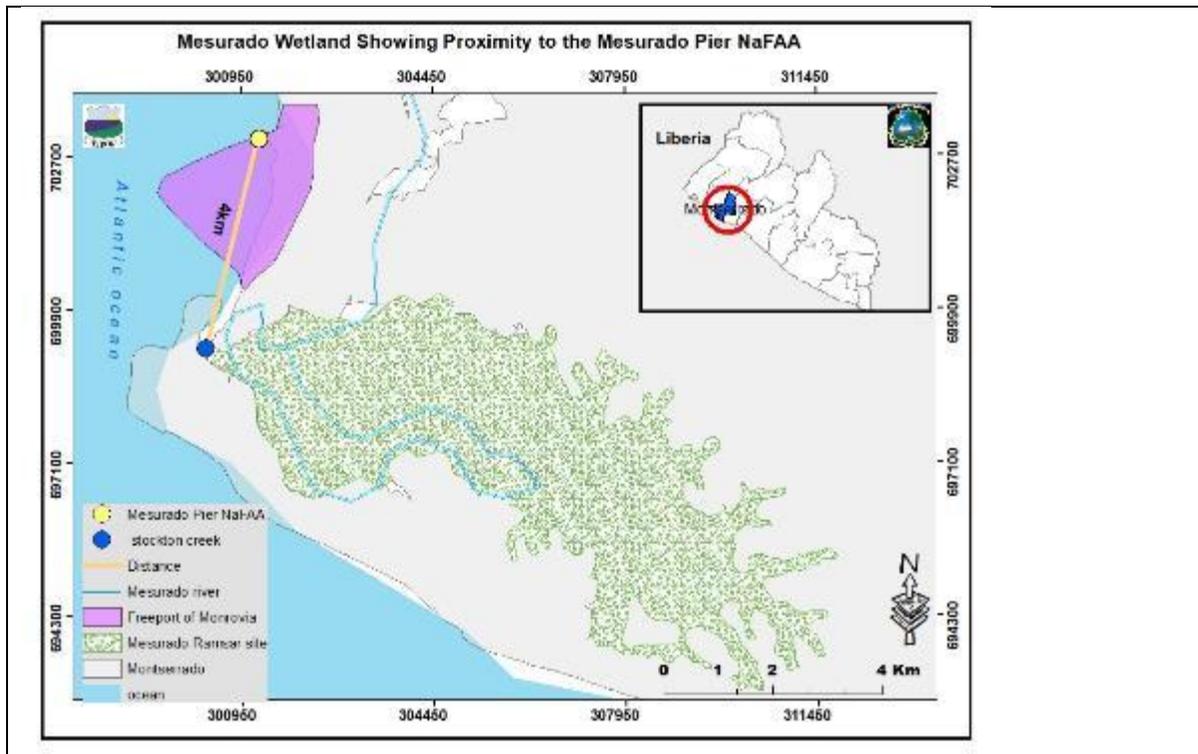
The Mesurado River runs through Greater Monrovia and separate the city from Paynesville and surrounding environs. The St. Paul River empties into the Atlantic Ocean along the Bushrod Island, on the outskirts of Monrovia. In 2013, it was projected that climate change impacts to the St. Paul River base due to changes in seasonal rainfall patterns and rising temperatures, will negatively impact the water balance by decreasing total water levels and/or degrading water quality through contamination. Runoff in the St. Paul River Basin was projected to decrease 0.7–25% by the 2020s due to precipitation and temperature changes, impacting potential hydropower production at the Mount Coffee plant as well as the water supply for Monrovia.¹⁷

3.5.2 Wetland

. A significant portion of Greater Monrovia comprise of the brackish Mesurado wetland, a Ramsar site (declared under the Convention of Wetlands **Error! Reference source not found.****Error! Reference source not found.** shows the location of the Mesurado Wetlands within Greater Monrovia.

¹⁷ ECOWAS (2013). Policy Brief. West Africa Coastal Climate Change National Adaptation Planning Workshop. <https://www.usaid.gov/sites/default/files/documents/1860/NAP%20Policy%20brief.pdf>

Figure 6: Location of Ramsar site in Greater Monrovia (source: EPA in Liberia).



The Mesurado wetland is important for the protection of three mangrove species (*Rhizophora harrisonii*, *R. No* management plan currently exists, although it is under a protected area management network designated as a Ramsar site.

3.5.3 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 beach that vary from 20-25 meters wide at the narrowest, to 60-80 meters at the widest beaches along the south-eastern extent. The entire south-eastern border of Greater Monrovia is along the coastline of approximately 20 miles along the Atlantic Ocean. Notable erosion and land loss continues to occur in Congo Town and Paynesville and along the Mesurado river delta due to sand mining and the rising sea level due to climate change.

3.6 Socio-economic Environment

3.6.1 Population

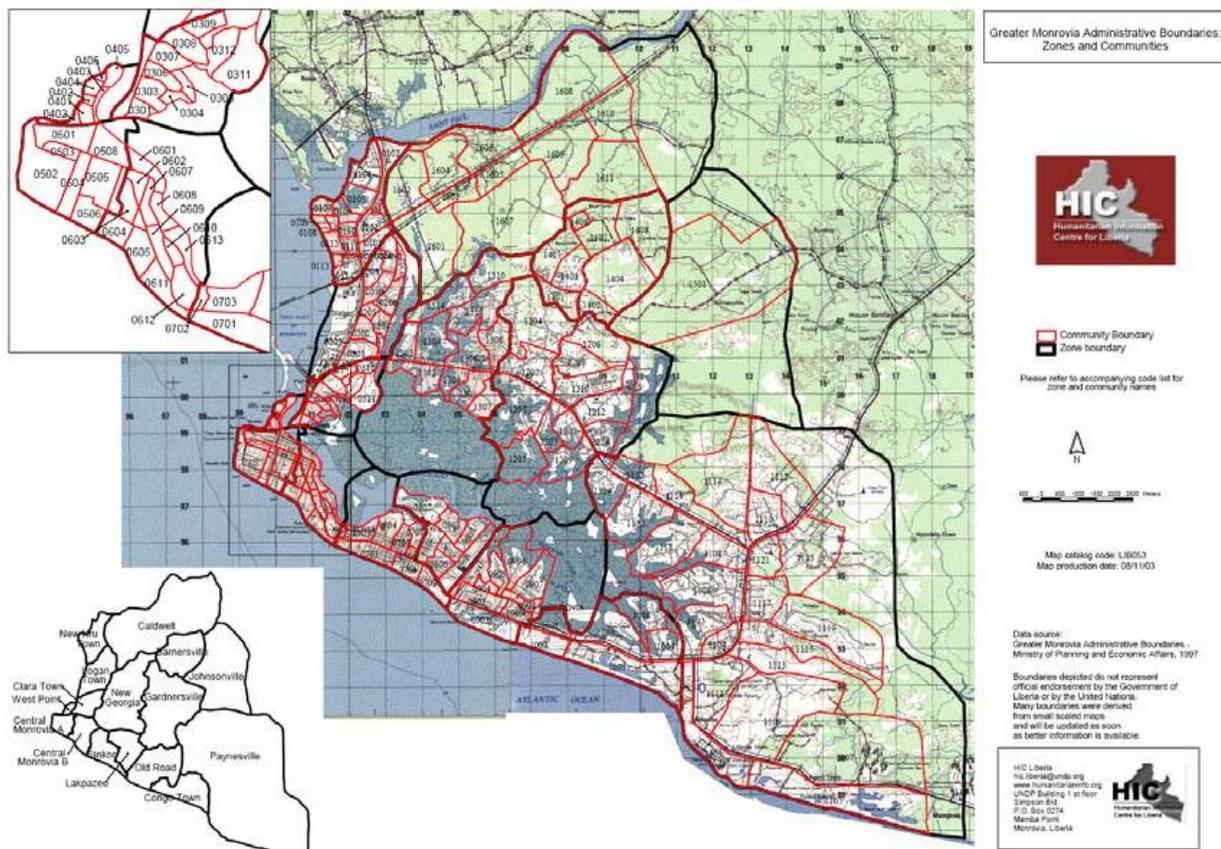
In 2019, the World Bank estimated the Liberia population at approximately 4.9 million with about 50.2% being males while the remaining 49.7% are females. The population is growing rapidly with a fertility rate of 4.4 children per woman in 2020. More than two-thirds of the population is under the age of 35 and nearly one half of the population lives in urban areas.

Greater Monrovia is the largest agglomeration in Liberia by far, but decades of conflict has stalled investments and development, impacting the economy. Greater Monrovia is home to about 1.3 million people, a fourth of the country's total population. Greater Monrovia dominates in terms of number of

firms and jobs. Its residents are, on average, both wealthier and better served compared to their rural counterparts; however, the city is estimated to contribute less than 20 percent towards national GDP. The number of urban poor is growing, finance for infrastructure and services is not available, and the cost of congestion threaten to exceed the gains from proximity and density.

The Greater Monrovia area comprises of the following urban areas: Central Monrovia A, Central Monrovia B, Sinkor, Lakpasee, Old Road, Congo Town, Paynesville, Johnsonville, Gardnerville, Barnesville, New Georgia, Caldwell, New Kru Town, Logan Town, Clara Town and West Point. The areas can be seen on the map in figure 7 below.

Figure 7: Map of Greater Monrovia with Communities and Connecting Roads (HIC, United Nations)



3.6.2 Demography

Around 45 percent of Greater Monrovia’s population is at its prime age between 15 and 40, and 40 percent are below 15 years of age constituting the next cohort of youth seeking employment and opportunities

3.6.3 Employment

Among Liberia’s urban areas, only the economy of Greater Monrovia has transitioned from agriculture to services. About five percent of Greater Monrovia’s workforce is still engaged in agriculture, while more than 65 percent have shifted to service sector jobs. Even though the share of agricultural employment in Greater Monrovia is negligible, the markets in and around Greater Monrovia are a critical lifeline for farmers to sell their produce and residents to meet their food demands. Likewise, there are opportunities

for agro-processing industries that could add value to agricultural produce for exports and that benefit from improved infrastructure and connectivity offered by urban densities. Other urban areas have seen little change to their local economy¹¹, despite the rapid urban population growth outside the capital area, which suggests that Greater Monrovia could play an important role in engaging local supply chains and incentivizing local value-additions within the capital area to Liberia's abundant raw materials. The majority of Greater Monrovia's service sector employment is within the informal, low-productive and non-tradeable segments. About 90 percent of all jobs tabulated above produce non-tradable goods or services. Variations between 2008 and 2016 are a likely manifestation of domestic demand fluctuations, driven by the presence of United Nations and other agencies in the aftermath of the conflict and during the Ebola crises. Informality and low productivity correlate with firm size: 57 percent of the firms in Montserrado employ three or fewer employees and almost two thirds had a turn-over of less than LRD 70k in 2017, equivalent to about USD 560 at 2017 exchange rates¹². Montserrado is home to nearly 70 percent of the 17,642 firms assessed in Liberia's establishment census in 2017. The majority of these businesses are run by 'reluctant entrepreneurs'¹³ that have insufficient skills to work in formal jobs, no access to credit to expand and grow their business but need to produce something to make a living. Only 962 firms registered under the Establishment Census in Liberia have more than 20 employees; nearly 80 percent of these larger firms are in Montserrado.

3.6.4 Informal Settlements

Informal areas in Greater Monrovia are estimated to cover about 70 percent of the total built-up area, and accommodate two thirds of Greater Monrovia's population. Using algorithm that combined satellite imagery with machine learning to predict informal land use (through similarity in built density, type of structures, rooflines, access to paved streets, low elevation and so forth) estimates that about 70 percent of built-up area in Greater Monrovia is informally developed. This means two out of three Monroviens reside in such informal settlements, with limited or no security of tenure, on public or private land that is often illegally encroached or reclaimed. Despite the clustering of slums in certain central parts of the city, proportion of households living in informal dwellings is evenly distributed making up between 60-70 percent of the housing stock regardless of the distance away from the city center. Additionally, the distribution of poor households based on the national poverty line mirrors the distribution of informal settlements across the city. This is similar to the distribution of the bottom 40 percent of households when taking only Greater Monrovia as the frame of reference: the distribution of poor Monrovia households is even across the city. Overall, this pattern suggests two trends. First, many non-poor sections of society are likely to live in informal housing or conditions that are slum-like. Second, poorer households are unlikely to cluster in specific parts of the city but are likely to live in informal conditions whenever space avails (likely around the perimeter of the Mesurado River).¹⁸

Third, in the Greater Monrovia area alone, a predicted 16 cm sea level rise by 2030 would put at risk 675,000 people and 9,500 hectares of land. Within areas of informal settlement, a significant amount of infrastructure is located in flood zones. These informal settlements are physically vulnerable due to precarious siting, especially to potential damage to critical infrastructure. Livelihoods are also expected to be negatively impacted for those settlers working in sensitive sectors of the economy. Already, since 2013, sea level rise and coastal erosion have displaced more than 6,500 and destroyed 800 houses in the

¹⁸ World Bank (2019): Greater Monrovia Urban Review. A Spatial Analysis Investigating Constraints and Opportunities.

West Point slum of Monrovia. In addition, increasing rainfall and flooding events would exacerbate risk of malaria, cholera, and diarrheal diseases.¹⁹

3.6.5 Poverty

Despite the clustering of slums in certain central parts of the city, proportion of households living in informal dwellings is evenly distributed making up between 60-70 percent of the housing stock regardless of the distance away from the city center. Additionally, the distribution of poor households based on the national poverty line mirrors the distribution of informal settlements across the city.²⁶ This is similar to the distribution of the bottom 40 percent of households when taking only Greater Monrovia as the frame of reference: the distribution of poor Monrovia households is even across the city. Overall, this pattern suggests two trends. First, many non-poor sections of society are likely to live in informal housing or conditions that are slum-like. Second, poorer households are unlikely to cluster in specific parts of the city but are likely to live in informal conditions whenever space avails (likely around the perimeter of the Mesurado River).

The poverty rate of Montserrado as a whole is 20.3 percent. The poverty headcount of Greater Monrovia is similar (19 percent). However, the proportion of households in poverty is closer to 13.5 percent.⁹

3.6.6 Education

Education is defined as attending a primary school, secondary school or university. Formal education rates are significantly higher in urban areas, between males and within the richest population group.

Even though both literacy level and education attainments are improving in Greater Monrovia – and elsewhere – one in four adults still reports having not completed primary schooling. While the proportion of Monrovia residents with completed higher education is small (about 5 percent), almost 20 percent of the adults report attending polytechnic, vocational or adult education classes as a means to make progress in their careers. Monrovia has higher educational achievements, especially at secondary and tertiary level compared to their rural peers and are less likely to have only primary schooling or no education. The table 7 below shows the educational status of residents of Greater Monrovia.

Table 7: educational status of residents of Greater Monrovia

	Census (2008) – Urban Montserrado		DHS (2013) – Urban Montserrado		HIES(2016) – Greater Monrovia	
	Youth	Adult	Youth	Adult	Youth	Adult
Less than Primary Completed	37.1	38.1	26.7	30.7	18.4	23.8
Primary Completed	45.1	34.6	48.7	37.2	49.1	35.6
Secondary Completed	17.1	24.0	23.3	28.3	30.9	35.4
University Completed	0.7	3.4	1.1	3.8	1.5	5.1

3.6.7 Gender-based Violence

Women of Liberia are also subject to high levels of gender-based violence (GBV). Sexual violence, domestic violence, sexual exploitation and abuse, incest, early and forced marriage, wife inheritance, and female

¹⁹ Hommann, K., and Rajashekar, A.V. (2016). Greater Monrovia Urban Review: A Spatial Analysis investigating Constraints and Opportunities. World Bank Group. URL: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/399551593487350119/main-document-review>

genital mutation (FGM) are the most prevalent forms of GBV in the country. These were particularly visible and normalized during the civil wars which were particularly heavy on Liberian women, who endured a large portion of the violence during the conflict. In 2005, two years after the end of the conflict, the World Health Organization estimated that 82 percent of women were subjected to multiple forms of violence, and 77 percent of them experienced rape, with sexual violence being a weapon of war. Services for GBV survivors are very limited.

There may be a relationship between gender-based violence (GBV) and housing, land and property (HLP) rights within the Greater Monrovia area. Monrovia has a high rate of displacement and transience due to war. The area has widespread land tenure insecurity and high rates of GBV.

In many homes in the Greater Monrovia area, women are in a difficult position in terms of assuming the role as household heads and breadwinner for the family. The occupation of women in domestic chores and petty trading to generate income has limited women's capacity to actively participate in community life and share issues affecting them. Government structures are more open to men than women because most of the leadership positions are co-opted by men. As reported in the National Demographic and Household Survey 2019-2020, 66% of women, I Montserrado County, age 15-49 have experienced physical violence since age 15, while 6% have experienced sexual violence. This percentage is higher (57%) amongst married women who have ever experienced emotional, physical, or sexual violence committed by their most recent husband/partner.

3.7 Flood risks and drainage system in Greater Monrovia

The Greater Monrovia area is very susceptible to predominantly pluvial floods²⁰. The rainy season lasts from May to October, and peak annual rainstorms can occur throughout the rainy season, and rainstorms outside the rainy season are not uncommon. The highest recorded daily rainfall for Monrovia is 435mm, whilst rainstorms in excess of 100mm in a day are not uncommon. This makes Monrovia one of the wettest cities in the World. By comparison Accra, Ghana (a similar coastal city in West Africa) receives around 800mm a year with around 200mm in the rainiest month.

Mesurado Wetlands are located in the capital city Monrovia and Montserrado County (the largest administrative region of the country with 1 million people), the site is important for the protection of three mangrove species (*Rhizophora harrisonii*, *R. mangle* and *Avicennia africana*), which are threatened by intense charcoal burning and fuel wood collection. 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 and plays an important role in shoreline stabilization and sediment trapping. The site is currently used for fuel wood collection, as a dumping site, for car washing, and fishing, with fish and crustaceans sold to the population of Monrovia. An additional threat comes from unregulated fishing, as well as from pollution from the industries around the site, including an oil refinery and paint factories. No management plan currently exists, but there are plans to put it under a protected area management network once it has been successfully designated as a Ramsar site. Ramsar site no.1631.

The drainage system in the city is very fragmented and in need of rehabilitation (e.g. removal of waste, sediments, repairs to existing structures) and upgrading (e.g. new connections, more retention, larger

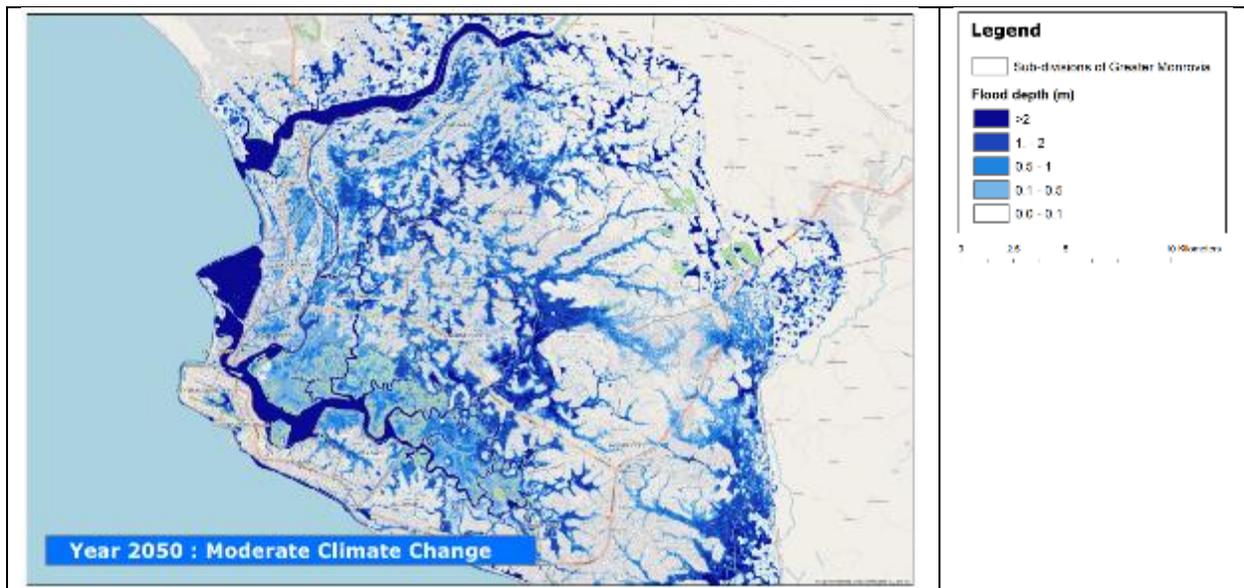
²⁰ Deltares, 2021. Flood Risk Profile for Greater Monrovia. Prepared for the World Bank.

outlets)²¹. Only Central Monrovia and some parts of Bushrod Island have a drainage system with some primary drains (e.g. Soniwein drain) and road drains (e.g. some parts of UN drive at Bushrod Island). These existing drainage systems are in need of major rehabilitation and also upgrading in almost the entire city to ensure a well-functioning and comprehensive drainage system. Another issue is that information on the drainage system is lacking and also there are no written records or maps of flood hotspots based on historical events. The drainage system has never been fully mapped.

The Greater Monrovia area has an undulating topography with various surrounding water bodies resulting in a complex hydrological functioning. A recent modeling study showing that the entire city is vulnerable to pluvial flooding (**Error! Reference source not found.8**). The flood hotspots derived from this modeling study such as Logan Town, West New Kru Town, Central Monrovia, etc. are confirmed by the experiences of local stakeholders.

Heavy rains, storm surges, sea level rise and increased erosion, puts both urban and rural infrastructure at risk. Furthermore, heavily populated parts of the coast would be affected by frequent waterlogging, increased coastal erosion, and sea-level rise. This is likely to result in significant economic losses, damage to agricultural lands, infrastructure as well as human casualties. Climate change is also expected to increase risks and severity of natural disasters in Liberia, through more intense temperatures as well as rainfall patterns, increased temperatures and prolonged heat waves.

Figure 8: Modeled flood hazard map for Greater Monrovia for pluvial flooding representing a 50yr event for the year 2050 under moderate climate change scenarios (Representative Climate Pathway 4.5 from IPCC).

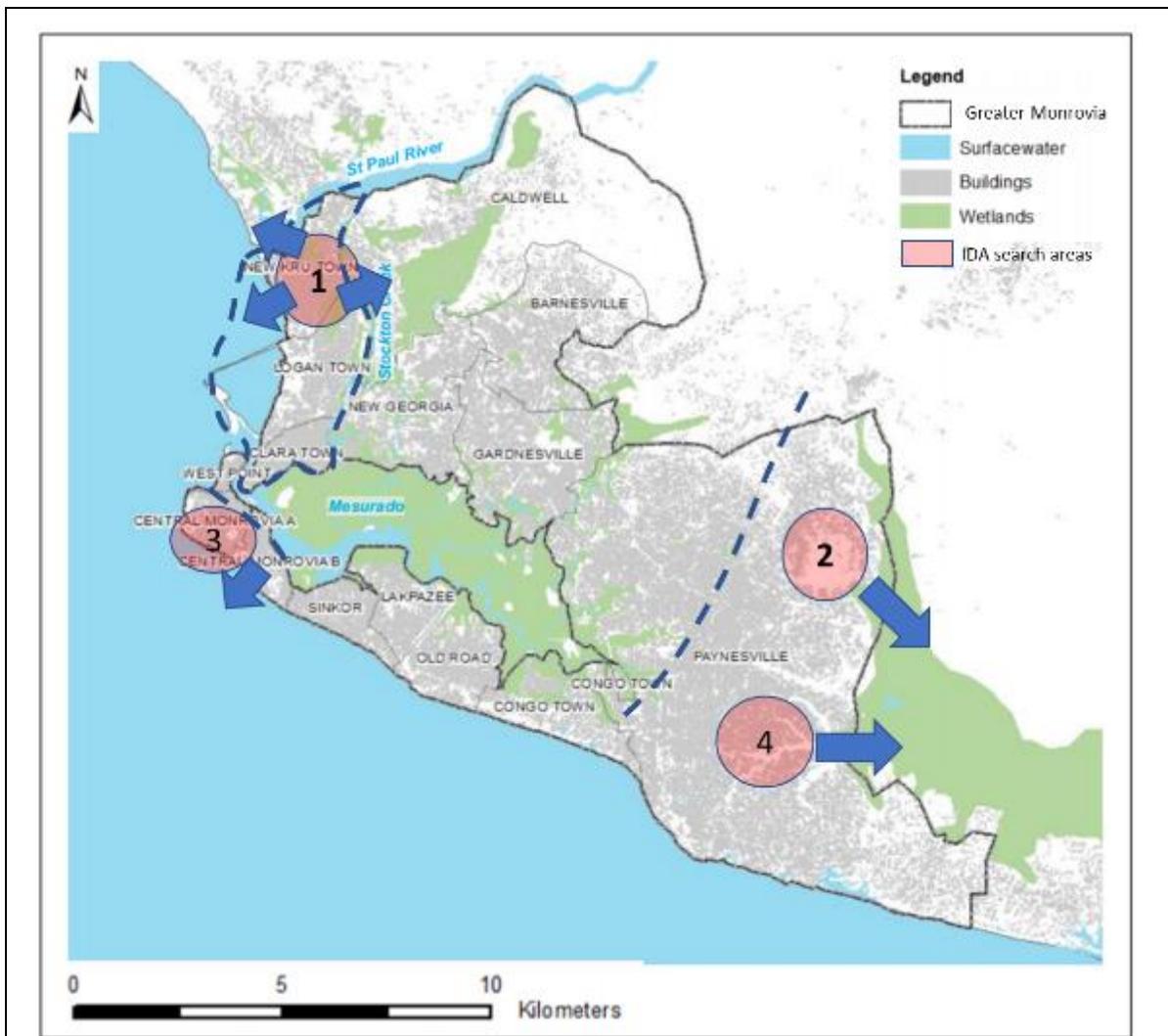


The Liberia Urban Resilience Project (LURP) has currently four potential intervention sites identified in the Greater Monrovia area: The northern part of Bushrod Island (1), the area around Omega Market (2), the Central Business District (3) and southeastern Paynesville (4). These are depicted in **Error! Reference source not found.9** and will be further elaborated upon in more detailed studies with main focus on

²¹ JICA, 2009. The Masterplan Study on Urban Facilities Restoration and Improvement in Monrovia in the Republic of Liberia. Prepared for Ministry of Public Works (including the updated version from 2017).

improving urban drainage from predominantly rainfall events reducing the economic loss and improve access to essential services and activities (e.g. markets, schools, hospitals).

Figure 9: Four potential project areas in Monrovia for Component 1 in relation to Mesurado Wetlands



Legend: Bushrod Island (1), Omega Market (2), the Central Business District (3) and southeastern Paynesville (4). The green area named “Mesurado” is roughly identical to the boundaries of the Ramsar site. The blue dotted lines indicate indicatively the boundaries of relevant hydrological catchments and the arrows denote the direction of drainage.

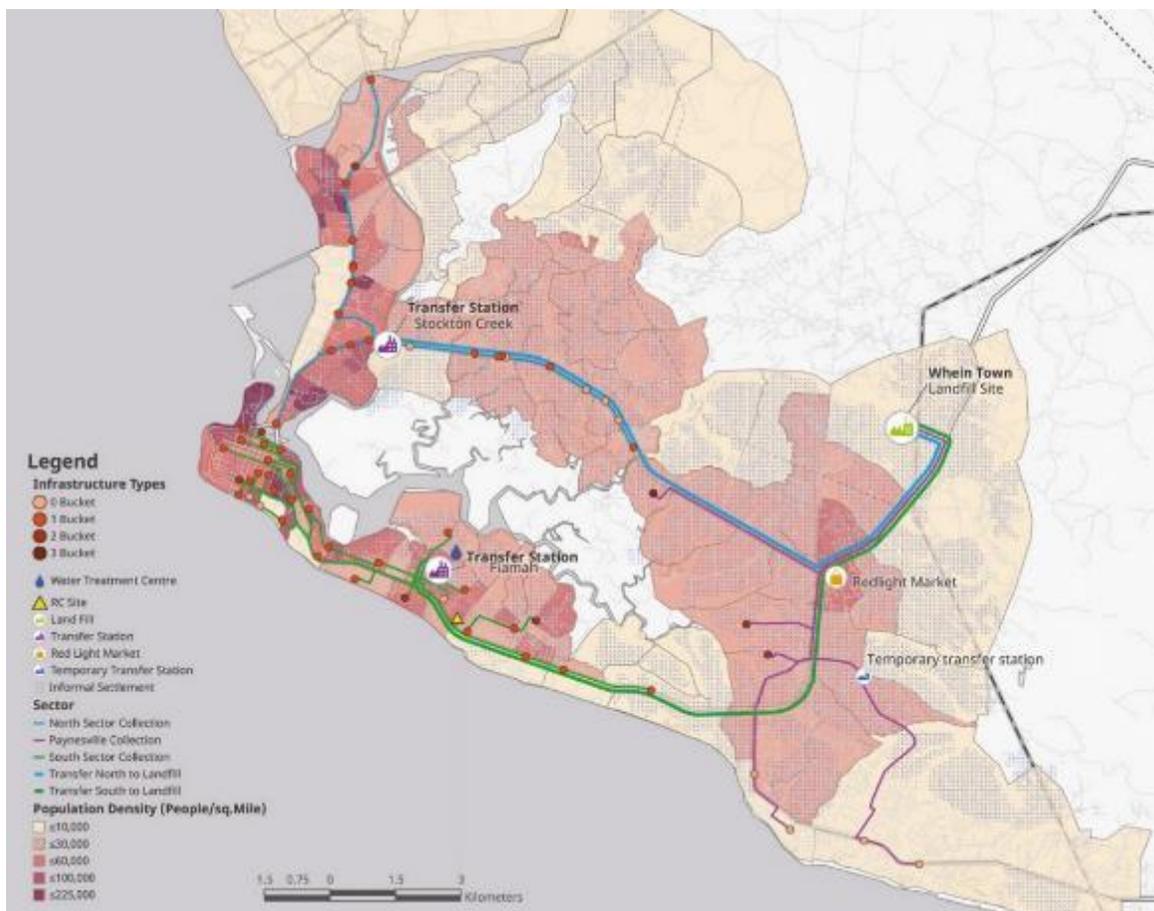
3.8 Solid Waste Management

There is not a clear waste collection chain in Greater Monrovia. Some households and small businesses subscribe to the city cooperation or a community-based enterprise (CBE), to collect and dispose of waste appropriately. In Monrovia, CBEs are expected to dispose of waste at the nearest Waste Transfer Station, of which Monrovia has 2. There are no transfer stations in Paynesville, which results in the illegal disposal of waste in nearby waterways, drainage structures, along the side of the road, etc. Those who do not subscribe to any service either dump in nearby skip buckets, random locations, or pay local youth to take

waste away. In all of these scenarios, the city corporations inevitably collect and transfer waste to the Whein Town Landfill. Some large businesses/institutions have contracts with small-medium enterprises, who collect and transfer waste directly to the Landfill.

The city of Monrovia has an agreement with nine surrounding Townships and one Borough to collect and dispose of waste. Paynesville City is the only other municipality collecting waste in Greater Monrovia. All disposal sites in Greater Monrovia are owned and operated by the City of Monrovia. The Whein Town Landfill, although located in the City of Paynesville, is also under the authority of the MCC. In addition to the landfill, MCC owns and operates two transfer stations located in the Fiamah and Stockton Creek communities. Paynesville City has access to the landfill. A new Landfill site is being financed in Cheesemanburg under a parallel World Bank financed Project, which will increase the disposal capacity of the city. Figure 10 shows the existing SWM facilities in Greater Monrovia.

Figure 10: Map of Existing Solid Waste Management Facilities in Greater Monrovia



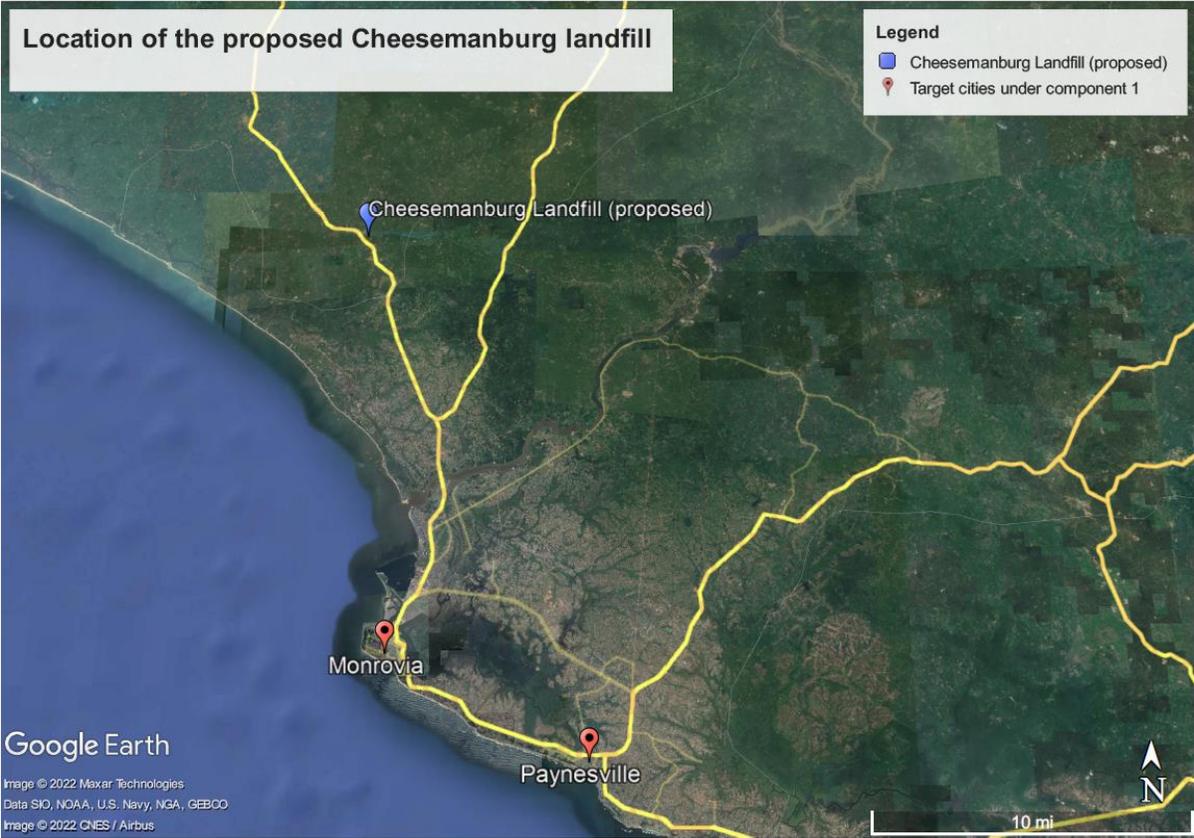
Waste pickers can be seen at all dump locations, mostly at the landfill. There is an estimated population of 9,000 who live in close proximity to the landfill, of which 15 self-identified scavengers earn their daily living from picking and selling waste (iron and other metals).²²

The current Whein Town landfill is poorly managed and reaching capacity, so it is possible that the existing landfill will not be able to accommodate any significant quantities of waste. The ongoing World Bank

²² Travel report from visit in Paynesville, Liberia 25 Nov until 2 Dec 18. Jessica Magnusson. 11/26/18

Cheesemanburg Landfill and Urban Sanitation Project is investing in the establishment of a new landfill, which is in the design phase and works for the first cell of the landfill will hopefully be operational before the end of 2023. The Cheesemanburg landfill facility is proposed to provide increased access to solid waste management (SWM) services in Monrovia City and surrounding area. In the first ten years the volume of solid waste is 1244807 cu.m and the volume of intermediate soil is 124480 cu.m (10 % of the solid waste) and Over the geo-membrane and its protection will be placed a drainage layer of aggregate (40cm) its volume 38000 cu.m. The capacity of cell 1 serve first ten years is 1.407480 cu,m if the The sides of the landfill area to be to a slope 1V/3H and the max. height is 30 m. Recycling and composting will be instituted as a way to waste minimization and expansion of the life of the landfill. There will be potential to increase the capacity of the landfill as the proposed design does not cover the entire site available. Figure 11 shows the location for the site of the new Cheesemanburg Landfill.

Figure 11: Location for the site of the new Cheesemanburg Landfill



3.9 Land Tenure in Greater Monrovia

The lack of adequate shelter has resulted in the proliferation of unplanned settlements and services and enclaves of residential communities and slums characterized by congestions, makeshift buildings, unsanitary conditions, and insecure tenure status. The slums are mainly located in Central Monrovia, the marshlands around Mesurado River, and along the beachside near the port.

The high cost of land and accommodation has pushed the urban poor into informal settlements. The city authorities grant rights to squatters to live in public property with the understanding that when the government decides to develop such areas all inhabitants must be relocated.

Fewer households in Monrovia own the dwelling that they live in compared to the rural sample (33% versus 66%). The majority of households are renting their dwelling (49%). 19% of the households in Greater Monrovia are squatters, meaning that they settle upon unoccupied land without legal claim or authority.

Overcrowding is more serious in Greater Monrovia compared to the rest of the country. Households occupy on average 1.8 rooms, which translates to an average occupancy of about 3.8 people per room. In terms of demographic factors, female-headed households in Greater Monrovia are less likely to have access to land than their male counterparts. Households with access to land in Greater Monrovia are much more likely than households in rural areas to have a deed for their land.

4.0 CHAPTER FOUR: POTENTIAL ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS, AND PROPOSED MITIGATION MEASURES

This chapter identifies potential risks and impacts that could arise from the activities proposed under the subprojects. The identified impacts apply to the socio-economic environment as well as the bio-physical environment. These impacts can be positive or negative and direct or indirect.

4.1 Proposed subprojects and Potential Impacts

The following subprojects are proposed under each of the components as shown in table 8.

Table 8: Subproject Activities with proposed interventions

Subproject Components/ Subcomponent	Proposed Menu of Investments	Potential Impacts	ESF Requirement
<p>Component 1: Climate Resilient Infrastructure and Urban Upgrading. This component will support flood risk management and community upgrading infrastructure in prioritized areas of Greater Monrovia. Investments in drainage infrastructure will improve connectivity of drainage networks and are prioritized to reduce climate and flood risk.</p>			
<p>Subcomponent 1.1: Climate Risk Management Infrastructure. This subcomponent will support climate and flood risk management infrastructure in prioritized areas of Greater Monrovia.</p>	<p>Rehabilitation of existing and construction of new drainage infrastructure in selected areas and blue solutions (open water areas for temporary stormwater storage), and green solutions (wetland or green vegetated areas to maintain soil infiltration and temporarily store surface stormwater).</p>	<ul style="list-style-type: none"> ➤ Impact on land, structures, and trees ➤ Impact on air, water ➤ Impact on biodiversity and natural habitats ➤ Temporary economic displacement ➤ Impact on livelihoods ➤ Health and safety of the workers and communities ➤ Impact on schools, health centre, community centre, local markets etc. ➤ Impacts on women mobility ➤ Increase of traffic and 	<p>ESIA, LMP, SEP, GBVAP, CHSP, OHSP, GM, WMP, RP</p>

		<p>related traffic accidents</p> <ul style="list-style-type: none"> ➤ Risk of GBV and SEA/SH ➤ Labour related issues such as labour influx, forced labour, labour disputes, gender inequity etc ➤ Increase of vulnerability to local communities ➤ Risk of forced eviction, including squatters ➤ Climate change risk ➤ Poor waste management, including disposal of solar PV materials including batteries. 	
<p>Subcomponent 1.2: Climate Resilient Community and Market Upgrading. This will ensure “improved water supply, sanitation and waste management facilities, finance community halls, childcare infrastructure investments in neighborhoods and market areas in the same locations as the drainage and health facilities, cold storage facilities, and green parks and recreational</p>	<p>Infrastructure investments could include improved water supply, sanitation and waste management/transfer/sorting facilities, community halls, installation of solar streetlights, childcare and health facilities, cold storage facilities, and green parks and recreational spaces</p>	<ul style="list-style-type: none"> ➤ Same as in subcomponent 1.1 ➤ Waste management risks <ul style="list-style-type: none"> ➤ Life and Fire Safety Risks 	<p>Same as in subcomponent 1.1</p>

spaces. water retention infrastructure.			
<p><i>Component 2: Strengthening Integrated Resilient Urban Development Capacity</i></p> <p>This Component will support resilient integrated spatial planning, capacity needs assessment and investment plans in Greater Monrovia, including Paynesville, as well as the next three largest cities in Liberia: Buchanan, Gbarnga and Ganta.</p>			
<p>Subcomponent 2.1: Resilient Urban Planning and Development Control. This subcomponent will finance activities to increase the capacities of relevant stakeholders to develop, maintain and update a climate resilient spatial development plan.</p>	<p>Development of urban plans to include an infrastructure diagnostic and investment plan, including transport, drainage, ICT, water and sanitation, and market infrastructure.</p>	<ul style="list-style-type: none"> ➤ Lack of proper consultations with affected stakeholders ➤ Elite capture of investments by powerful or better-connected beneficiaries, at the risk of excluding some segments of society, especially disadvantaged and marginalized groups 	<p>SEP, GM</p>
<p>Subcomponent 2.2: Solid Waste Management Operations and Financing. To keep drainage and other hydraulic infrastructure clear of waste, allowing for the infrastructure to effectively protect against climate and flood risks, the Solid Waste Management (SWM) system, which is a core responsibility of municipal</p>	<p>This subcomponent will finance the development of a Solid Waste Management Operational Plan for the Greater Monrovia Area that will include a detailed financial model, private sector engagement plan and inform the operational needs of the system.</p>	<ul style="list-style-type: none"> ➤ Lack of proper consultations with affected stakeholders ➤ Elite capture of investments by powerful or better-connected beneficiaries, at the risk of excluding some segments of society, especially disadvantaged and marginalized groups 	<p>SEP, GM</p>

governments, needs to be drastically improved.			
<u>Component 3: Project Management (US\$4 million).</u>	This component will finance all expenses required for project management and coordination, compliance monitoring of social, environmental and safety standards, fiduciary management, and monitoring and evaluation (M&E)	➤ There are no environmental and social risks associated with this subcomponent	N/A
Provide immediate response to an eligible crisis or emergency following the Bank procedures		➤ The risks will be determined when prior to the implementation of the CERC, when deemed relevant	The mitigation measures will be determined when prior to implementation of the CERC, when deemed relevant

The preparation of an ESMF at this stage, while the project is being developed, allows flexibility to rely on the guidance, protocols and procedures outlined in the ESMF to later prepare site or activity specific ESIA/ESMPs that are proportionate to the impact/risk level. Once the subproject sites are confirmed and all the necessary information, including subproject designs are available, site specific ESIA/ESMP will be prepared before commencement of any work.

This ESMF will therefore provide guidelines for screening all subproject activities and sub-activities and conducting further assessment and preparation of a full and proportionate ESIA/ESMP. Based on the sensitivities of the receiving environment, the scale and types of interventions, and the capacity of the implementing agencies to manage the E&S risks the project’s Environmental and Social Risk Classification (ESRC) is rated **Substantial**.

4.2 Anticipated Adverse Social Impacts and Mitigation Measures:

The potential adverse social impacts of components 1 and 2 may involve land acquisition and displacement of land-users and/or livelihoods. In this regard, the project shall pay special attention to selected localities where the project interventions are planned to be implemented - given that these localities a) are densely populated, b) host the largest and most popular wholesale and retail markets, c) accommodate important economic hubs in Greater Monrovia, d) are places where traders are carrying out day-to-day trading activities to support their livelihoods and, e) are localities where diverse communities and assertive people are found. The project intervention in the four selected potential localities is expected to have economic and physical displacements on people residing and carrying out livelihood activities in each locality. While the number of potential Project Affected Persons (PAPs) cannot be determined at this stage of the project, the nature of the physical and economic displacements and their associated impacts are expected to be permanent and temporary.

Direct social risks associated with displacements will likely include: i) interruptions or permanent income losses for those day-to-day traders who are depending on trading activities to support themselves and their families, which could result to potential youths' and market women's unemployment as well loss/reduction of household income; ii) full or partial losses of structures/properties used for residence, commercial and rental purposes; iii) denial or limitation of access to local residents to the Atlantic Ocean coastal areas that could likely limit their fisheries activities and deprive them from providing cash to support their households; iv) potential increase in urban poor including women and youths who may be affected by temporary or permanent losses of income due to their inability to undertake trading activities in project affected areas; v) potential exclusion of vulnerable people (women, disabled, elderly, the ill and ethnic minorities) from compensation and the project benefits, thereby worsening their situation and widening the inequality gaps; vi) likely increase in exploitation of women, girls and children who are likely to become most vulnerable as result of project interventions and losses of income; viii) the unknown nature of MPW/PMU's capacity to manage social risks; ix.) potential rise in SEA/SH related cases as a result of labor influx; x) potential community health risks associated with traffic and road safety, safety of services and community exposure to health issues, infrastructure design issues; and xi) potential risks and impacts arising from labor influx.

The Sexual exploitation and abuse and sexual harassment (SEA/SH) risk is rated Substantial. GBV, SEA/SH continues to be a major challenge for Liberia. Early marriage, rape, offensive touching (sexual assault), forced prostitution, wife inheritance and forced servitude are the main types of sexual and gender-based violence perpetrated in the communities. As per the 2020 Demographic and Household Survey report, 60 percent of women and girls in Liberia have experienced physical violence and 9 percent have experienced sexual violence. Services for GBV survivors (including healthcare, psychosocial support, and justice) are limited, even in urban settings. Further, transactional sexual relationships are often viewed as a survival mechanism for adolescent girls in urban areas to obtain food, housing, clothing, school fees and other essentials. The project has the potential to increase these risks in several ways, including by bringing workers and laborers implementing the project's infrastructure activities into contact with vulnerable women and girls.

Given the ranges of social risks flagged above and considering the sensitive nature of the areas where the project is planned to be implemented, the project will be required to implement mitigation measures proportional to the project risk including: a) exploring and considering design options that could avoid or minimize livelihoods disturbances in the four potential localities as well as consulting affected communities on design options to be considered taking into consideration: b) examining livelihoods activities undertaken in the project impact corridors and their economic implications both to affected people and to Greater Monrovia as a whole; c) examining contexts and characteristics of local communities in each of the potential intervention locations and; d) understanding the nature and challenges faced by vulnerable people when designing the subprojects and mitigation measures. In addition to the proportional design measures discussed, the project will be required to adopt robust risk mitigation measures capable of offsetting the direct socioeconomic risks associated with displacements, including: i) providing adequate compensations for income losses; ii) providing full replacements cost for affected structures; iii) ensuring alternative route and means of livelihoods for those who are dependent on fisheries; iv) reducing, to the extent possible, trading activities disruptions; v) ensuring inclusion of vulnerable people in compensation and livelihood restoration plans and project benefit sharing arrangements; vi.) demonstrating and enforcing no tolerance to exploitation of women, girls and children who may become most vulnerable as result of project interventions; vii.) ensuring that MPW has in place an efficient PMU with competent E&S staff; viii) developing and implementing SEA/SH action plan; and ix) adopting community health and safety plan (CHSP).

In view of the high prevalence of GBV in Liberia the likelihood that the project will tilt the power dynamics towards those contractors' workers with cash, the project will address these risks by conducting site-specific SEA/SH risk assessments and developing an SEA/SH Action Plan. Measures will include at a minimum; (a) requirements for contractors to submit Codes of Conduct and include plans for worker training and accountability in their Contractor-ESMPs (C-ESMPs) and other ESF instruments; (b) a project Grievance Mechanism with special procedures for confidential and ethical reporting of SEA/SH incidents; (c) mapping of GBV service providers in the project area to provide a referral pathway for survivors who report; (d) community sensitization on SEA/SH risks and reporting; and (e) training for MPW on addressing SEA/SH as part of social risk management. The project will explore the engagement of a qualified GBV service provider or NGO to support the MPW/PMU one month after project effectiveness to design and implement the measures and respond to any incidents. Potential positive and adverse risks and impacts are discussed below.

4.3 Positive Impacts

Liberia Urban Resilience Project Support to community and local institutions and stakeholders:

Enhanced urban living conditions and climate resilience: The project is expected to bring positive impacts to Greater Monrovia in terms of enhanced urban living conditions and climate resilience, as well as strengthened municipal and institutional capacities for integrated urban management. An economic analysis was conducted to estimate the value-for-money of the project investments, focusing on Component 1. Specifically, an (i) economic evaluation of drainage and flood risk management interventions whose benefits were measured through avoidance of direct damages due to reduced flood risk, and (ii) an economic evaluation of the avoidance of output losses (e.g., business interruption and other indirect losses), and the related increase in economic activities due to reduced perception of risk by investors. The interventions under the project will support closing the infrastructure gap in underserved areas and improving socio-economic resilience of Greater Monrovia.

Strengthening institutions and creating an enabling environment for inclusive and sustainable growth: The project will also contribute to the Liberia/World Bank Country Partnership Framework²³ pillar 1 (strengthening institutions and creating an enabling environment for inclusive and sustainable growth), particularly in greater transparency, accountability, and efficiency in the public institutions. Under the project, community ownership of interventions is also critical for sustainability. In this respect, the project will fully engage with the respective stakeholders, local authorities and communities throughout the entire lifecycle of the interventions, from design to prioritization of interventions and implementation, to ensure that these are aligned with beneficiaries' needs.

Improved resilience of communities to climate change: The project will provide support to infrastructure interventions that will consider appropriate design standards taking into account future climate scenarios equivalent to their expected lifespan, meaning that for infrastructure that is expected to last for 30 years, the most likely climate scenario for 2055 will be considered to ensure that the design standard meets the projected flood return period into the future. It is expected that the project will design for a flood return period of between 5 and 10 years, and this will be confirmed by the feasibility and design studies. Climate smart features will also be integrated into community infrastructure, which will be built away from potential flood prone areas, and slightly raised, to anticipate major flood events.

²³ World Bank (2018): Country Partnership for the Republic of Liberia for the Period FY19-24. Report No. 130753-LR

Job creation and improved livelihood: The project will provide support for local communities who will be employed directly as laborers, drivers, engineers etc. Women from the local communities will sell food and provide other services for the work force at various sites and the project will seek to hire women as part of the work force for civil works. The improved draining systems, technologies and climate resilient interventions such as soil and water pollutions control measures will all contribute to improving the livelihood of project communities. Improvement in livelihood will contribute to reducing poverty in project communities.

Enhanced institutional capacity to support service delivery: The project will strengthen the capacities of the Departments of MCC, PCC, MIA, LLA, MPW, LWSC, MOJ, MOT, NDMA and MME field operational to carry out various mandates. In addition, the project will support the PMU staff to identify and implement specific demand-driven knowledge and innovative research and testing equipment. These interventions will immensely contribute to creating robust institutions that will champion the Liberia Urban Resilience Project in communities.

Improved waste management system and reduced environmental impacts: Support to improve Municipal solid waste management operations and financing under subcomponent 2.2. will improve the operational effectiveness of the municipal waste management system and operations thereby reducing illegal dumping and burning in the longer run.

Gender empowerment. Under the LURP, female beneficiaries will be given priority at various project locations, especially female heads of household. The project emphasizes the inclusion of women and the enhancement of their role throughout the targeted areas. The project will additionally facilitate women's access to appropriate training and civil works related jobs. These will contribute to their financial independence, reduce their vulnerability and empower them.

Impacts on Vulnerable and disadvantage groups/communities/individuals: The sub-projects have been designed to provide a holistic response to a set of dynamic issues that poor, vulnerable rural communities face. It aims to increase contribution to the economy, poverty reduction, and environmental sustainability. The project intends to improve management of targeted communities' access to livelihoods and economic activities using improved communication and connectivity, resilience to climate change, etc. The Project's inclusive approach will result in benefits to households and individuals, especially the most disadvantaged like female-headed households, widows, the poorest, and elderly people.

4.4 Potential Adverse Environmental and Social Risks and Impacts

Potential adverse environmental and social (E&S) risks and impacts are discussed below in tables 9 and 10:

Table 9: Planning environmental and social (E&S) impacts

Project Activity	Area of Impact	Potential E&S Impact	Level of Impact
<i>Planning Phase (Including Design Activities)</i>			
The activities include: • identification of investment measures • assessment and selection of proposals • project siting	Physical Environment	<ul style="list-style-type: none"> • Designs that would change of drainage patterns in the area and risk for flooding/soil erosion upon project implementation. • Change in existing land use 	Moderate
	Biological Environment	<ul style="list-style-type: none"> • Floral and faunal habitat disturbance and loss especially in the Mesurado Wetland area. • Impact on natural habitats • Poor site selection and siting may cause flooding and damage to private property 	High
	Socio-economic	<ul style="list-style-type: none"> • Designs that would cause threats to livelihoods of local communities due to land acquisition or economic displacement. • Impacts on resource users on site, upstream and downstream of project activity sites and potential impacts on their livelihoods. 	Minor
	Archaeological and Cultural Heritage	<ul style="list-style-type: none"> • Designs that would cause disturbance or damage to cultural heritage and archeological (including both tangible and non-tangible heritage) upon project implementation. 	Minor
	Community Conflict	<ul style="list-style-type: none"> • Site selection or designs that would cause conflict among the communities living near the project sites on use of resources • Potential for unrealistic expectations and social rumors to cause conflict or social objection. 	Minor

Table 10: Implementation Phase environmental and social (E&S) impacts

LURP Intervention Sector	Project Activity	Area of Impact	Potential E&S Impact	Level of Impact
Implementation Phase (Construction Activities)				
All sectors	Projects construction activities typically include: <ul style="list-style-type: none"> • Site preparation and development • Civil works during construction or upgrade of markets, drainage structures, and other facilities • Trenching and excavation works • Storage of materials and Chemical / oil • Vehicle and equipment operation. • Land Use & Land Acquisition • Obtaining of materials from borrow sites and quarries (excavation and blasting) 	Air Quality	<ul style="list-style-type: none"> •Emission of pollutants from engines of construction machinery and equipment. •Dust “lifting” due to earthwork and movement of construction trucks and equipment on unpaved roads. •Mal odor (bad smell) during dredging 	Moderate
		Noise	<ul style="list-style-type: none"> •Noise from heavy equipment and truck traffic. •Noise from blasting materials borrow sites 	Moderate
		Soil, subsoil and land	<ul style="list-style-type: none"> •Soil erosion and sediment control from materials sourcing areas and site preparation activities. •Soil/subsoil contamination due to accidental spills and leaks from construction equipment. •Improper discharge of domestic sewage from construction camps/offices. •Improper disposal of wastes from construction camps/offices. 	Major
		Solid and hazardous waste as well liquid waste	<ul style="list-style-type: none"> •Production of construction wastes/demolition debris. •Solid wastes from construction camps/offices. •Improper disposal of solar PV waste and used batteries •Improper discharge of domestic sewage from construction camps/offices. •Improper disposal of fuel barrels, removed asphalt, paint 	Moderate

LURP Intervention Sector	Project Activity	Area of Impact	Potential E&S Impact	Level of Impact
	<ul style="list-style-type: none"> Demolition, lifting and transporting of debris and rubbles 		containers, asbestos materials, etc. <ul style="list-style-type: none"> Potential for hazardous materials and oil spills associated with heavy equipment operation and fueling activities. 	
Water Resources		<ul style="list-style-type: none"> Improper disposal of debris or construction wastes on riverbanks. Improper discharge of domestic sewage from construction camps/offices into surface or subsurface water bodies. Increase in water consumption used for construction works. 	Minor	
Dredged materials		<ul style="list-style-type: none"> A portion of the dredged material will be municipal solid waste, a small portion may also be contaminated or hazardous, including e-waste. No dredging around industrial area is anticipated so significant quantities of hazardous waste is not expected. This will need to be effectively and safely disposed of. 	Minor	
Flora, Fauna, and Sensitive (critical, natural etc.) habitats		<ul style="list-style-type: none"> Removal of trees or green cover for rehabilitation or construction purposes may result in loss of habitats. Pollution of rivers or waterways and wetlands like the Mesarado wetland areas adjacent to the project sites and may negatively affect the aquatic ecosystem. Increase or decrease in flow of water into wetlands due to drainage and water retention interventions. 	Moderate	
Archaeological and cultural Heritage		<ul style="list-style-type: none"> Impacts from the Potential Damage of Undiscovered Archaeological Remains. 	Minor	

LURP Intervention Sector	Project Activity	Area of Impact	Potential E&S Impact	Level of Impact
		Traffic Congestion and Detours	<ul style="list-style-type: none"> • Traffic impacts due to road blockages for construction purposes and detours. This may be associated with traffic congestions, increasing commuting time and creating inconvenience to road users. 	Moderate
		Socio- economic environment	<ul style="list-style-type: none"> • Temporary nuisance and inconvenience as a result of the construction activities including noise, emissions, and road traffic. • Influx of workers and the potential implications on communities' privacy. • Employment, working conditions and safety of workers at the construction site. • Disturbance of public health and quietness due to construction/rehabilitation activities. • Land acquisition or obstructing access to amenities due to construction/rehabilitation activities. • Potential child labor employment by local subcontractors. • Exacerbation of GBV, sexual exploitation, sexual harassment and other sexual offenses such as rape • Social conflict due to sharing of resources • Increase in crime in project areas • The LURP will require land for the construction of drainage network in the Project Beneficiary Communities. This might lead to land acquisition and displacement of residents. • The project component might require small areas of land for the location of groundwater pumping stations and, in some cases, construction of storage tanks/reservoirs. This might necessitate land acquisition and resettlement. 	Moderate

LURP Intervention Sector	Project Activity	Area of Impact	Potential E&S Impact	Level of Impact
			<ul style="list-style-type: none"> • Displaced households, particularly vulnerable populations who inhabit land that the project will occupy, might suffer detrimental effects on their livelihoods, productivity levels, and living standards • Trees and shrubs along watercourses will be removed in order to allow access for modifying the watercourse and the drainage channels 	
		Health and safety	<ul style="list-style-type: none"> •Falling from heights. •Vehicle/pedestrian accidents. •Falling into trenches. •Being buried in tunnels/excavations. •Breathing dust and other air pollutants. •Back aches caused by handling heavy material. •Suffering hearing loss from noise. •Damage from fire outbreak •Impacts related to exposure of high temperatures and humidity •Spread of communicable diseases, including HIV/AIDS •Insecurity in project areas may pose challenges to contractors' workforce, discourage potential workers from working in the area and also risk of loss of life, construction equipment like vehicles and other valuable inputs •Accidents and Injuries may occur during operation activities. Eg drowning of people and livestock at material borrow sites •Solar PV systems might overload existing electrical wiring and cause fires 	Moderate

Waste from Solar PV Systems²⁴

The main components of an off-grid solar product include photovoltaic (PV) solar modules, batteries (lithium-based or lead acid), lamps (mainly LED), control units with circuit-board-mounted electronic controls, cables, metal frames and fixtures, and appliances (TVs, radios, fans, etc) (GOGLA, 2019)^{25, 26}. After becoming waste, the components of the off-grid solar products are grouped according fractions such as metal, glass, plastics, paper and cardboard, and cables.

PV panels mainly consist of glass, followed by aluminum and mixed fractions (i.e., screws, metal and crystalline silicon). Lithium batteries (which are more expensive than Lead batteries) will be used. Lithium batteries are maintenance-free and have a longer lifespan as compared to Lead batteries. The use of Lithium batteries will reduce the frequency of disposing spent batteries, given that fact that there are no hazardous waste handling, treatment and disposal facilities in Liberia.

Life and Fire Safety

Although rare, design flaws, component defects, and faulty installation can cause solar rooftop or battery fires (very rare with lead acid batteries, contrary to Lithium-Ion batteries). Furthermore, solar PV systems can exceed the capacity of existing wiring. As with all electrical systems, these problems can cause arcs between conductors or to the ground, as well as hot spots, which can ignite nearby flammable material. Battery fires can be caused by either mechanical, thermal or electrical factors. Mechanical would be caused by physically damaging the unit, which can generate gases or increase the heat of a battery cell. Thermal could result from air conditioning or airflow not reaching the cells, allowing heat to build up. Electrical abuse happens during overcharging, undercharging or shorts from the inverter.

LURP will address Life and Fire safety risks by:

- Assessing target facilities under subcomponents 1.1 and 1.2 to ensure their compliance with local building codes and local fire department regulations
- Verifying that the facilities are structurally strong enough (particularly roofs) to support the proposed solar PV systems
- Confirming that solar PV systems will not overload the existing electrical installations
- Integrating preventive or corrective life and fire safety (L&FS) measures to address the incremental risks arising from the installation of solar PV systems, in accordance to paragraphs 6 and 7 of ESS4, Infrastructure and equipment design, and Section 3.3 of the General EHS Guidelines. The nature and extent of life and fire safety measures required will depend on the building type, occupancy, and exposures. Such measures might include, as necessary:
 - o Fire Prevention
 - o Means of Egress

²⁴ This section was extracted and adapted from: Gibson, M. and E. Demir. Electronic Waste (E-waste) Management for Off-grid Solar Solutions in displacement Settings. Norwegian refugee Council. 35 pages

²⁵ GOGLA (2019a). E-waste Toolkit Module 1 Briefing Note: Technical introduction to recycling of off-grid products. www.gogla.org/e-waste/introductionto-recycling

²⁶ GOGLA is a global association for the off-grid solar energy industry. It chairs an E-waste Circularity Working Group with GOGLA members, companies, investors, manufacturers, universities, and research institutes, which acts as a consultation group for developing learning output and sector guidance, through particular themes (repairability, standardized product labelling for disposal), and sharing best practices, problems, and solutions.

- o Detection and Alarm Systems
- o Compartmentation to prevent or slow the spread of fire and smoke
- o Fire Suppression and Control, such as the inclusion of portable fire extinguishers
- o Emergency Response Plan
- o Operation and Maintenance

4.5 *Potential Mitigation management and enhancement measures*

Possible environmental impacts during construction phase from the project construction, rehabilitation and maintenance activities should be identified. For mitigating the possible environmental impacts during construction phase mitigation measures are given in the Table 11 below.

Table 11: Potential Mitigation management and enhancement measures for subprojects under LURP

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
General ESHS Management					
Responsibilities and liabilities	Ensure that all workers, suppliers and possible subcontractors are familiar and comply with the requirements and specifications of this ESMF.	All ESS	Induction performed and recorded	Contractor	Report the induction event (participants, information shared etc.)
	Develop site specific subproject C-ESMP, define the frequency of the monitoring procedure. Develop other Management Plans as needed.	All ESS	Final subproject specific C-ESMP	Contractor	Monitor and record the management of the Environmental, Social and Health and Safety (ESHS) topics periodically
ESHS Management	Define all organisational and technical provisions to satisfy and follow up the specifications of the ESMP (e.g., resources, documentation)	All ESS	Requirements for the ESHS management are defined	Contractor	Once prior to finalization of site specific ESMP
	Make sure that the Site Manager/Supervisor has experience in dealing with ESHS management. Give authority for stop of works if non-conformities are identified. Communicate with the relevant authorities.	All ESS	The Site Manager has experience in dealing with ESHS issues of similar projects	Contractor	Once prior to selection of Site Manager. Weekly inspection reports.

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
Code of Conduct	Establish a Code of Conduct taking into consideration safety rules, substance abuse, environmental sensitivity, communicable diseases, gender issues (sexual harassment), respect for local beliefs and customs, community interactions etc.	All ESS	Code of Conduct in place and rules shared with personnel	Contractor	Punishable or misconduct behaviours are reported and communicated Check grievance records
ESHS Training	Provide H&S Induction and Training to the workforce regarding H&S risks and mitigation measures (including indirect workers) tailored to project scope (i.e., dredging/excavation of primary drains, construction of retention ponds, construction of small structures such as drainage outlets/culverts).	All ESS	Training performed and recorded	Contractor/ PMU	Check training records
	Awareness raising regarding community health and safety to the local communities through campaigns (e.g., schools) with special attention for health and safety issues around primary drains (e.g., water/sediment quality) and flood safety and role of waste disposal in general	ESS 4	Awareness raising campaigns performed and recorded	Contractor	Check information material produced (once a major change in the project occurs)
Site Management					

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
Protection of adjacent areas	Restrict excavation/ dredging activities of primary drains and other construction activities (e.g., enlarging of culverts/outlet structures) in targeted areas during periods of intense rainfall (mainly occurring during rainy season May till October) to prevent blockage of the drainage system. Use temporary bunding to reduce the risk of sediment, oil or chemical spills to the receiving waters.	ESS1, ESS3	Restrict excavation/dredging during intense rainfall.	Contractor	Site inspection
	Ensure that the design and sequencing of works considers the impacts of works in surrounding communities, especially during rainy season to avoid un-anticipated flooding of surrounding communities.	ESS1, ESS3	Sequence excavation/dredging especially during rainy season.	Design and supervision engineer + PMU.	Site inspection
	Carry out deep excavation works in cut off site areas as much as practically possible / efficient to prevent water from entering excavations.	ESS1, 3, 4	No water entering excavations	Contractor	Random site inspection
	Ensure that means of protection are in place to avoid or minimise adverse effects on vegetation, soils, groundwater and surface water, biodiversity, natural drainage and the water quality in areas within the works area. Construction methods to minimise impacts to the extent possible.	ESS 1, 4	No impacts identified in the adjacent environment	Contractor	Regular (e.g., monthly) monitoring of adjacent natural resources.
	Ensure that work site boundaries and limits are in accordance with plans agreed upon in advance. All construction activities should be carried out within boundaries.	ESS1, 4	Site boundaries and limits on site	Contractor	Site inspections

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
Selection of borrow areas, backfill material stockpile sites, landfill dump sites and access road	<p>Select borrow areas or areas to be excavated, backfill material stockpile locations, landfill sites for potential contaminated dredged material and access roads carefully with due consideration to environmental impacts if applicable to the project.</p> <p>Proper rehabilitation of the borrow sites, including access roads to be done in accordance with the local regulations. Cumulative waste impacts of all waste generated will be considered through waste management plan to determine capacity of landfills to accommodate the waste generated.</p>	ESS1, 4	Designated areas selected	Contractor	Once during site selection
Pollution Management					
Pollution prevention	Ensure all works carried out minimize pollution risk (e.g., dredged material handling from primary drains and/or retention ponds, liquid effluents; air emissions; noise and vibration management; vehicle and equipment maintenance and selection; fuel, oil and chemical storage and handling) including the whole duration of the project.	ESS1,3	No pollution identified	Contractor	Weekly inspection reports

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
Effluents	<p>Ensure appropriate containment and storage of construction wastewater, including sanitary water. No untreated effluent is discharged.</p> <p>In areas where community related WASH activities are envisaged disposal of sanitary waste using septic tanks and its impact on groundwater given the high water tables in the area, will be carefully addressed.</p>	ESS 1, 3	No untreated wastewater discharge	Contractor/P MU	Regular site inspection
Air Quality (atmospheric emissions and dust, etc.,)	Use to the extent possible, vehicles in appropriate technical conditions. Provide emissions control equipment (e.g., excavators, trucks, vessels/barges) where applicable (e.g., filters).	ESS 3	Technical Specification Sheet	Contractor	Prior to commencement of works and each time new equipment/vehicle is used at the site.
	Stockpiling dredged materials in a fenced location to be located further from communities along the open channels.	ESS3	Technical Specification Sheet	Contractor	Regular site inspection
	Use low sulphur content fuels, in line with legal provisions in force as well as local availability.	ESS 3	Technical Specification Sheet	Contractor	Regular documentation inspection
	Ensure vehicles and other equipment are switched off when not in use. Sensitise drivers.	ESS3	Engines switched off	Contractor	Site inspection
	Best practice to ensure minimisation of dust emissions (e.g., proper stockpiling, watering etc.) during dry and windy conditions and transportation.	ESS3	Watering conducted, no dust emissions are observed, no workers' grievances	Contractor	Regular site inspection
	Ensure speed limits on site. Sensitise drivers.	ESS1, 3, 4	Speed signs installed	Contractor	Random site inspection

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
Noise and vibration	Avoid operations and vehicle movements at night. Sensitise drivers.	ESS1, 3, 4	No work conducted between 10pm and 7 am/ no grievances received	Contractor	Random site inspection, review of filed grievances, interaction with community
	Set traffic speed limits. Sensitise drivers.	ESS 4	Speed limit signs Driver Training Records as part of Induction training	Contractor	Random site inspection, Review of training records
	Locate stationary equipment (such as power generators) as far as possible from nearby receptors (e.g. worker resting areas, populated areas and environmentally sensitive areas). Make sure that noise levels don't exceed 120db in case of equipment or vehicle use.	ESS1, 3	Distances between equipment and receptors are kept	Contractor	Once prior to commencement of works Monitor noise levels in case equipment is used
Waste Management					

<p>Dredged material management</p>	<p>A large part of the material dredged along the Soni Wein Channel is expected to be solid waste. There are no industrial areas along-side the channel so it is not expected that there will be any significant quantity of hazardous waste.</p> <p>The dredged material will be dewatered at a temporary handling site along the channel in order to separate the liquid/water/leachate from solid waste and silt. The dry residual material can be further separated to remove solid wastes from soils. Solid waste will be sent to the landfill, soils may be reclaimed for use in construction, brownfield rehabilitation, backfill, or as daily cover at the landfill, depending upon contamination levels, to be determined in the ESIA and Waste Management Plan.</p> <p>The ongoing Cheesemanburg Landfill and Urban Sanitation Project is investing in the establishment of a new landfill, which will hopefully be operational before the end of 2023. It is unlikely that drainage works under the LURP will start before the end of 2023. The project will make sure that sufficient landfilling capacity will be in place prior to the start of any works, and if they are not, the project may need to consider constructing an appropriate disposal site. Site-specific Waste Management Plans (WMP) will be part of the ESMPs, informed by feasibility studies, to manage general</p>	<p>ESS3</p>	<p>Testing at ESIA stage to determine composition of expected dredged materials. Inspection of disposal site.</p>	<p>Contractor</p>	<p>Regular inspection and testing during dredging.</p>
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Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
	construction waste as well as hazardous and non-hazardous wastes, consistent with ESS3. Given the possibility of not having a disposal site for hazardous waste, the project may need to finance the separation of such waste and the establishment of a sealed and capped cell in a landfill (probably Cheesemanburg) to accommodate for the waste and ensure it has the capacity to receive the quantities of waste generated.				
Solid waste management	Identify waste management facilities and waste management contractors. Ensure disposal through waste contractors licensed for treatment/removal/recycling of each of the waste types.	ESS3	Waste management through licensed contractors, if feasible	Contractor	Inspect waste management facilities Proof of contractors' certifications
	Ensure that all wastes produced are properly collected, segregated, stored, transported, and treated, according to the availability of treatment facilities following the waste hierarchy.	ESS3	Waste collection areas existent, waste inventories	Contractor	Random site inspections Review of waste inventories
	Minimise waste production to the extent possible.	ESS3, 4	Records of waste production are kept Waste Management Plan	Contractor	Monitor (e.g. random biannual) the amount of waste produced
	Document all waste related operations (type of wastes, quantities produced, disposal facilities, etc.).	ESS3, 4	Storage, transport and treatment of waste is guided by standard operating procedures and documented	Contractor	Document inspection

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
	Appropriate and safe storage of fuels, construction materials, wastes and any materials that can cause spills (e.g. batteries from energy generators).	ES3,4	Safe storage of materials, spill remediation equipment in place.	Contractor	Random site inspection monthly/quarterly site inspection reports
Hazardous waste management	<p>It is unlikely that any significant quantities of hazardous waste will be produced in the project; however, all project-related activities will comply with 'Hazardous Materials Management Environmental Health and Safety Guidelines' (IFC, 2007)</p> <p>In the event that significant quantities of hazardous wastes are generated, the project will identify or develop certified hazardous waste disposal capacity, such as a hazardous landfill cell, likely at Cheesemanburg site at an existing or planned site, safe storage adjacent to a landfill site or other appropriate location until capacity is established, or transboundary transport to a certified hazardous waste disposal facility according to the guidelines of the Basel Convention.</p>	ESS3, 4	<p>Storage, transport and treatment of waste is documented</p> <p>Hazardous Waste Management Plan</p>	Contractor	<p>Document inspection</p> <p>Sampling of dredged material during ESIA</p> <p>Random site visits (in the event of hazardous waste disposal/treatment)</p>
Bio-diversity Management					
Vegetation clearing	Limit vegetation clearing to areas within the site boundary where it is strictly necessary.	ESS1	Vegetation clearing minimal	Contractor	Random site inspection

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
	Describe the methods of vegetation clearance. Ensure that no chemicals/pesticides are used, burning of vegetation is restricted etc.	ESS1	No use of fires or chemicals on site	Contractor	Site inspection during site clearance
	Avoid clearing mature trees and endangered species.	ESS1, 6	No mature trees cleared	Contractor	Visual inspection
	Avoid off-road vehicle traffic. Use existing roads. Sensitise drivers	ESS1,3,5	No off-road traffic	Contractor	Random site inspection
Biodiversity	Avoid to the extent possible areas of ecological value during design, including Mesurado wetland areas.	ESS6	Areas of ecological value avoided	PMU	Site assessment prior to site selection. Ecological value assessment if needed.
	Assess the potential impacts of an increase or decrease of the flow of water into wetland areas due to drainage and water retention interventions, through Biodiversity Management Plan in the ESIA.	ESS6	Assess impacts	PMU	Hydrological modelling and Ecological value assessment if needed.
	Biodiversity Management Plan in the ESIA to assess and avoid major disturbances of natural habitats, where possible, and encourage preservation.	ESS6	Disturbance of habitats limited	Contractor	Inspection of construction practices.
	Monitor impacts on flora and fauna.	ESS6	Impacts on flora and fauna avoided	Contractor	Regular inspections

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
Erosion and sediment management	If construction takes place on inclined surfaces/slopes, ensure preventive erosion control measures are applied (e.g. plan to retain trees and other vegetation, use of natural contours for roads and drainage networks, excavated drainage channels).	ESS1, 3	Preventive erosion control measures in place	Contractor	Random site inspection to check if measures were applied
	If constructions are designed where relatively high current velocities take place (e.g. drainage outlet structures, culverts, etc.), ensure that sufficient erosion control measures are applied (e.g. local bed/bank protection with rock or concrete elements).	ESS1	Preventive erosion control measures in place	Contractor	Random site inspection to check if measures were applied
	Ensure appropriate storing of topsoil removed. After construction, topsoil will be used as backfill for restoration of the area.	ESS1	Topsoil stored and re-used	Contractor	Monitor if topsoil is properly stored
	If works take place during rainy / wet periods impacts shall be minimized and mitigated, informed by the ESIA and associated BMP.				
	Optimal stockpiling.	ESS1	Stockpile height limited	Contractor	Random site inspection
Site rehabilitation	Ensure revegetation and restoration of cleared areas where possible after construction using native species.	ESS1,4	Revegetation completed	Contractor/ PMU	One-time inspection after construction
	Ensure that rehabilitated areas don't pose health and safety risks (such as holes, ponds).	ESS1,4	Reinstatement completed	Contractor/ PMU	One-time inspection after construction
	Reinstatement of construction working area to the best possible after construction activities are completed.	ESS1, 4	Reinstatement completed	Contractor/ PMU	One-time inspection after construction

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
	Rehabilitate borrow areas, backfill material stockpile sites and access roads, where applicable.	ESS1, 4	Rehabilitation completed	Contractor	One-time inspection after construction
Health and Safety					
Health and Safety Plan	Develop a Health and Safety Plan.	ESS1,2	HS Plan in place	Contractor	Monitoring of Contractor's measures
Accident reporting procedure	Ensure all H&S related incidents (e.g. observations, accidents) on site are recorded and followed up properly.	ESS2, 4	Incident recording process in place	Contractors	Check incident/accident records
Personal protective equipment	Ensure the provision of Personal Protective Equipment (PPE) for workers (hardhats, masks, safety glasses, safety boots etc. depending on project type).	ESS2	PPE used by everyone on-site	Contractor/Site Manager	Random site inspection
Emergency scenarios prevention	Ensure immediate cleaning of any spills and remediation of contaminated areas after construction.	ESS3	Workers trained.	Contractor/PMU	Random site inspection after spill events One-time inspection after construction
	Provide necessary prevention equipment on site in line with applicable regulations to respond to emergency scenarios e.g. fire, explosion, floods, natural hazards etc.	ESS1,2	Prevention equipment in place	Contractor	Regular site inspection
	Maintain high standard in housekeeping on site. Construction materials and light equipment should be stored properly.	ESS1, 2, 4	Visual verification of good housekeeping on-site	Contractor	Random site inspection

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
	Flood Emergency Management procedure will be requested as part of the contractor ESMP, which will include consideration of health and safety of workers and surrounding community in the rainy season.	ESS1,2	Emergency Management Procedure in place	Contractor	Regular site inspection
First-aid	Ensure minimum first aid provisions on site. (suitably stocked first-aid kits; a person, respectively an adequate number of first-aid helpers and ensure that staff and workers are informed about first-aid arrangements)	ESS2, ESS4	Suitable first aid kits on site Ensure the presence of first aid helpers in all shifts	Contractor	Regular monitoring of first aid kits
Access to health care and training	Ensure the workforce has access to primary healthcare on site, providing prescriptions and vaccinations.	ESS2	Healthcare available on site	Contractor	Random site inspection
	In case more than 35 workers are present on site, ensure that a hospital, medical clinic or a health centre can be reached within a period of 45 minutes.	ESS2	Medical centres in the proximity of the site.	Contractor	Medical centres in the proximity of the site identified once prior the commencement of works
Hygiene, accommodation and food	Ensure provision of Health and Safety (H&S) and hygienic and sanitary facilities at the site, including shaded welfare areas, bathrooms, changing rooms and potable water. Ensure toilets and changing rooms are separated between male and female employees.	ESS2	Appropriate H&S and sanitary facilities provided at site	Contractor	Random site inspection

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
	Ensure the provision of adequate space, supply of water, adequate sewage and garbage disposal system, appropriate protection against heat, cold, damp, fire and disease-carrying animals, adequate sanitary and washing facilities, adequate lighting, and basic medical services, in accordance with all applicable health and safety regulations and norms.	ESS2	Appropriate conditions for workers on site	Contractor	Random site inspection Grievance mechanism log
	Report any occurrence of any communicable diseases amongst the workforce (COVID, STD, HIV/AIDS, TB, malaria and Hepatitis B and C). Sensitise workers.	ESS2, 4	Communicable Diseases Register	Contractor	Review of diseases register and disease prevention programme if available.
Labor Management					
Labor conditions	Ensure minimum legal labour standards as per ILO regulations (child/forced labour, sexual assault, no discrimination, equal opportunities, working hours, minimum wages) are met.	ESS2	Grievance Mechanism Records, Training recorded	Contractor	Inspection reports (also from labour authorities), Review of grievance register and training record
	Ensure that all direct and indirect workers have access to and are aware about the Workers Grievance Mechanism where they can raise workplace relevant complaints anonymously.	ESS2	Grievance Mechanism in place and grievances recorded	Contractor/ PMU	Review of grievance register
	Ensure all workers have the same rights and are treated equally.	ESS2	Non-discrimination policy in place	Contractor	Random site inspection Grievance mechanism log

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
Local recruitment	Ensure local communities are preferred for the supply of goods and services to the Project and Project personnel, where appropriate.	ESS2	Local Procurement and Employment Records	Contractor	Review procurement and employment rules and records
Transport	Organise carpools/buses for worker transportation where needed.	ESS2	Carpools/ buses used	Contractor	None
Community interaction	Engage/ communicate/inform communities. Ensure consultations with the local authorities and communities regarding the construction. Obtain local knowledge regarding chance finds and land acquisition matters.	ESS2, ESS10	SEP, Minutes of Meetings Grievance Mechanism	Contractor/ PMU	Review of grievance register Minutes of consultation meetings
	Initiate an efficient Grievance Mechanism to allow potentially affected individuals to raise their concerns.	ESS2	Grievance Mechanism in place, grievances recorded	Contractor/ PMU	Review of grievance register
	Ensure all contractors implement codes of conduct concerning employment and workforce behaviour (including but not limited to safety rules, zero tolerance for substance abuse, environmental sensitivity of the area, dangers of sexually transmissible diseases and HIV/AIDS, gender equality and sexual harassment, respect for the beliefs and customs of the populations and community relations in general).	ESS2	Workers Code of Conduct Grievance Mechanism records	Contractor/ PMU	Worker interviews, Review of grievance log

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
	Engage with the local community and potential affected households to understand their needs and identify the risk of damage to their livelihood basis through the Project (e.g. take of pasture land, lack of access to water).	ESS10	Minutes of Meetings Grievance Mechanism records Management Plan for Land Acquisition and Compensation if needed	Contractor/ PMU	Review of grievance register and meeting minutes
Gender based violence (GBV), sexual exploitation and abuse (SEA) and sexual harassment (SH)	<p>The project will conduct a comprehensive SEA/SH Risk Assessment and develop an SEA/SH Action Plan (to include key actions listed below among others to be identified through risk assessment)</p> <p>The project's Grievance Mechanism will have special channels to address SEA/SH complaints confidentially and ethically</p> <p>PMU to engage services of local CSO to educate all workers and nearby communities and stakeholders on preventing and responding to SEA and SH ahead of any subproject related works;</p> <p>Ensure that GBV service providers are mapped and establish partnerships and a referral pathway to relevant government agencies and NGOs to ensure survivors of SEA and SH access survivor centered services such as medical care, psychosocial support, legal redress, safety, etc., as and when necessary;</p>	ESS2, 4	GBV Management plan	PMU	Monthly

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
	<p>SEA/SH risks and reporting mechanisms will be communicated to communities</p> <p>Contractor will be obligated to submit Codes of Conduct that prohibit SEA/SH as part of the procurement process</p> <p>Contractor will enforce the Code of Conduct and regularly train workers on the content</p> <p>Provision of gender disaggregated facilities - separate bathing, changing, sanitation facilities for men and women;</p> <p>Grievance mechanisms including non-retaliation should be set up for the workers;</p>	ESS2, 4	<p>Code of Conduct signed by all workers Training records, records on GBV</p> <p>GM Logs</p>	Contractor	GM procedures and logs
Child Protection, Child Labor, SEA involving children	<p>In addition to the measures above to address SEA/SH, the project will have special provisions to address risks involving children (persons under the age of 18)</p> <p>Project's Grievance Mechanism will include special procedures for SEA/SH involving children, including linkages to child-friendly service providers and any mandatory requirements to report incidents to the authorities</p>	ESS2, 4	Child protection strategy	PMU	Monthly

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
Code of Conduct	<p>Workers will be educated on Codes of Conduct, including prohibitions on sexual activity with persons under the age of 18 and on the relevant laws and polices protecting children</p> <p>Ensure no children are employed on site in accordance with national labor laws</p> <p>Ensure visibility of signage and information, education and communication materials on such issues in the construction sites</p>	ESS2, 4	<p>Code of Conduct signed by all workers Training records, records on Child protection</p> <p>GM Logs</p>	Contractor	GM procedures and logs
Involuntary Resettlement and Land Acquisition					
Damage to people and property	<p>Ensure that site areas are provided with appropriate security, fencing, signage and lighting.</p> <p>Use hazard notices/signs/barriers to protect children and other vulnerable people from harm and prevent access to non-workers.</p>	ESS2, 10	H&S planning of construction site done, items installed	Contractor	Random site inspection

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
Land acquisition and land take	Should land acquisition be inevitable, a timely and fair compensation should be given to all affected persons In-situ resettlement will be the objective wherever possible. Avoid to the extent possible land take of both formal and informal landowners/land users. If land take is inevitable, no forced eviction should take place. Owners should be compensated prior to access to land. Engage with the local community to understand the land ownership and land use.	ESS5	Resettlement Plan (RP)	MoPW/PMU	Once during site selection Follow up of land acquisition/compensation process
Traffic Management					
Traffic management	Ensure safe driving by Project personnel (e.g. through training/induction).	ESS2, 4	Driver Training Records as part of Induction training	Contractor	Review of training records
	Target signage and outreach activities to improve public awareness of traffic changes and potential hazards for high-risk sections of public roads, including near the site and laydown areas.	ESS2, 4	Warning signs Minutes of Meetings	Contractor	Inspection of traffic routes, Review of grievance register
Cultural Heritage					

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Relevant ESS	Means of Verification	Responsibility	Monitoring Procedure
Fossils/ Archaeological Chance Finds	<p>Establish specific procedures to manage the protection of archaeological and historical sites, chance finds and fossils. Ensure all finds of cultural heritage (e.g. graves, old ceramic, old building fragments) are reported immediately to the relevant authority. See Sample Chance procedures in the Annex 8</p> <p>Avoid excavation in the ultimate neighbourhood of a chance find, fence the chance find and await instructions from the competent authority.</p>	ESS8	Training records, records about chance fiends	PMU Contractor	Site inspection

4.6 World Bank Environmental, Social, Safety and Security (ESHS) Requirements

The Environmental, Social, Health and Safety (ESHS) requirements²⁷ are a standard list of requirements that contractors must implement for most subprojects. The subproject specific ESMPs prepared by the PMU will highlight the relevant requirements, but might also supplement the ESHS requirements, as needed, by defining additional requirements. The ESHS requirements will be incorporated in the bidding documents and as technical clauses in contracts.

The ESHS requirements include 11 sections:

1. General Provisions
2. ESHS Training
3. Site Management
4. Occupational Safety
5. Health
6. Road safety and Traffic Safety
7. Emergency Preparedness and Response
8. Labor force management, including the Code of Conduct
9. Stakeholder Engagement
10. Contractor Environmental and Social Reporting
11. Solar PV Systems (Code of Practice)

²⁷ The ESHS requirements build on the General EHS Guidelines of the World Bank Group, but also take into account other World Bank guidelines, and good practice notes

5.0 CHAPTER FIVE: PROCEDURES FOR MANAGEMENT OF ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS

5.1 Introduction

This Chapter describes the environmental and social procedures that will be followed to ensure the project complies with the World Bank ESSs and statutory requirements which apply to the project. The World Bank ESS1 provides guidance on the environmental assessment procedures for World Bank funded projects while the Liberia EPA Act (2003) also establishes a process to screen and evaluate all developments, undertakings, and activities which have the potential to give rise to significant environmental impacts.

LURP sub-projects will use a structured approach to environmental and social management to allow the project development process following the WB 10 ESSs, adopting the mitigation hierarchy approach of;

- (a) Anticipate and avoid risks and impacts;
- (b) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels
- (c) Once risks and impacts have been minimized or reduced, mitigate; and
- (d) Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.

The subprojects will also adopt an approach to enhance positive impacts where practically feasible. A sub-project is defined as follows:

A subproject is a set of activities that are grouped together for the purpose of assessing environmental and social impacts, and of defining appropriate and sufficient mitigation measures. Whenever possible and efficient, the PMU will synchronize the organization of activities into subprojects for the purpose of environmental and social risks management with the bundling of activities for the purpose of procurement. Subprojects could thus be a single facility, or also a cluster of facilities depending on the circumstances.

The following is an indicative list of the proportionate ESIA's that are expected to be undertaken for the sub-projects:

- i) Northern Bushrod Island;
- (ii) Omega Market Area;
- (iii) Central Monrovia-Soniwein Canal; and
- (iv) South Eastern Paynesville

The following are important to note regarding the

- EPA approval of screening forms, ToRs and instruments, according to national requirements, does in no way replace the requirement for screening forms, ToRs and instruments to meet ESF requirements.
- The subprojects ToRs and instruments will be subjected to a prior review by the World Bank.

Exclusion of the following activities must be adhered to :

1. Activities involving harmful or exploitative forms of forced labor/harmful child labor
2. Production, trade, storage or transport of large volumes of hazardous chemicals, or the commercial use of hazardous chemicals
3. Activities that encroach on lands owned, or claimed under adjudication, by Indigenous Peoples without the full and documented consent of those Peoples
4. Activities that would significantly convert natural habitats or significantly alter areas of potentially significant biodiversity and/or cultural resources
5. Rehabilitation activities that may reduce the structural integrity of existing buildings.

5.2 E&S Procedures During Project implementation

The following sections describe what needs to be done at each stage of the overall project life – sub-projects implementation, implementation of the project activities, and reporting on progress.

Step 1: Screening

Environmental and social screening marks the beginning of risk and impact management for all sub-project activities. The Environmental and Social Specialists will first screen sub-project activities once the activities are confirmed using the E&S screening tool in Annex 3. The screening of sub-projects will include a detailed screening for biodiversity and climate resilience impacts, to be conducted by a biodiversity specialist taking into account available studies, involving field visits and documented with supporting evidence. The Environmental and Social Specialists of the PMU will review the findings of the screening reports and undertake the following exercises:

- Determine whether proposed activities are likely to have (i) no or low impacts, (ii) minimal or not likely to be significant Impact, (iii) significant negative environmental and social impacts; and identify appropriate mitigation measures for activities with adverse impacts;
- Assign initial E&S risks classification for the proposed activity and identify the type and depth of environmental and social assessment or instrument (i.e. ESIA, ESMP, RP, E&S audits etc.) to be carried out for the subproject activity;
- Determine the need for EPA environmental permit and other statutory permits for the proposed activity.

No or Low Impacts:

- When there are no or low impacts, the E&S Specialists at the PMU must consult internally and confirm with the World Bank if no further E&S instrument will be required. Once an agreement is reached, the activity may commence, and the E&S Specialists may proceed with the minimum regular reporting requirements as established in the Environmental and Social Commitment Plan (ESCP)

Minimal or not likely to be significant Impact:

- When there are minimal or not likely to be significant impacts and there is low probability of serious adverse effects, the E&S Specialists will submit a screening report to the Bank and the World Bank may require the project to prepare an **Environmental and Social Management Plan (ESMP)** or any other instrument deemed fit. The E&S Specialists will consult with the EPA on

the need register the sub-project activity or prepare any report, e.g., Preliminary Environmental Report, if necessary.

Significant Adverse E&S Risks and Impact:

- When there are likely to be significant E&S risks and impacts, the E&S Specialists will submit a screening report to the World Bank who will advise on the suitable E&S instrument(s) to be prepared. The PMU's E&S Specialists will follow the EPA due processes as discussed below to ensure statutory compliance.

Step 2: Preparation and Clearance of TOR

- The PMU will submit the TOR for the ESIA/ESMP/RP studies to the World Bank for review and clearance.

(a)

The ESMP **Step 3: Selection of Consultant and Preparation of ESIA, ESMP and RP**

- The PMU shall select a consultant for the preparation of ESIA/ESMP following the provisions of the procurement policies and procedures of the World Bank Group and the Liberian
- applicable procurement legislation and policies. The ESIA report shall also include an ESMP which must address potential direct, indirect, residual and cumulative impacts of the subproject activity on the environment and social setting at the pre-construction, construction, operation and decommissioning phases.

Step 4: Application for ESIA Permit and Submission of Project Brief

- A formal request, in the form of a letter, is made to the EPA prior to the commencement of project activities. The consultant hired shall also include a Project Brief, that provides details on project design (a) The activities that shall be undertaken during and after the development of the project; (b) copy of facility design , blueprint and other technical drawing where necessary (c) the materials to be used during construction (d) Impact Identification, (e) mitigation measures, and (f) any other supporting document, (i.e. ESMF, RPF) which may be relevant to the EPA for decision making.

Step 5: Preparation and Submission of ESIA, ESMP, RP Instruments

- The PMU shall submit the instruments to the EPA and the World Bank for review and clearance. Until the World Bank clears such instruments, the PMU cannot commence implementation of the subproject activity. The instruments shall also be submitted to the EPA for approval and issuance of the requisite permit.

Step 6: Disclosure

- Once the EPA and the World Bank clear the ESIA, the PMU shall disclose the report in country using appropriate media. The PMU shall notify the World Bank of the disclosure which will enable the Bank to disclose the report on its external website.
- As part of the process the PMU must engage relevant stakeholders and project affected persons.

Step 7: Inclusion of ESMPs in the Bidding Documents

- For subproject interventions involving civil works or those in which contractors will be needed to execute the tasks e.g. the construction and rehabilitation of drainages, the E&S Specialists will ensure that site specific instruments (ESIAs, ESMPs, etc.), as may be applicable, are ready before commencement of the bidding process;
- The E&S Specialists will work with other relevant specialists, e.g., the Procurement Specialist to incorporate relevant clauses, provisions, mitigation measures, E&S reporting requirements etc. as contained in the ESMP in the bidding document and contracts.
- At pre-bid meetings with prospective contractors, the E&S Specialists will avail themselves to clarify and respond to environmental and social issues the prospective bidders may have and also use the opportunity to highlight potential risky and impactful activities.
- *The PMU shall for all contracted construction activities:*
 - Reference the ESHS requirements in Requests for Proposals and Invitations to Bid
 - Require that bidders submit a preliminary environmental and social plan as part of their bids, describing the principles and methodology they will use to address relevant ESHS issues during the contract, and include all costs associated with managing environmental and social issues in their bids.
 - Consider during the selection process the quality of the preliminary environmental and social plan, the bidders' past environmental and social performance, and the ability of the bidder to manage environmental and social issues
 - Require that selected contractors prepare a Contractor Environmental and Social Management Plan (C-ESMP) that details how the relevant ESHS requirements will be implemented, including personnel, taking into account the site-specific proportionate ESMP prepared by the PMU for the subproject
 - Approve the C-ESMP before the start of activities
 - Use the C-ESMP as the benchmark when monitoring and evaluating the contractor's environmental and social performance
 - *Contractors will be contractually obligated to fully implement their respective C-ESMPs.*

Step 8: Selection of Contractors

- The evaluation of bids for works will be undertaken by a panel (team) comprising the E&S Specialists.
- The E&S Specialists will assess and evaluate bidders' responsiveness to the E&S issues including their ESHS Management Strategy and Implementation Plan (ESHS-MSIP), Code of Conduct and having qualified and competent E&S Officers among their proposed staff.
- The E&S Specialist will advise the panel appropriately.

Step 9: Implementation of ESMPs by Contractors

- The E&S Specialists working with the Procurement Specialist and/or Contract Management Specialist will include relevant documents/plans that the Contractor has to prepare and implement e.g. Contractor's ESMP (C-ESMP), Health and Safety Management Plan, Waste Management Plan, Emergency Preparedness and Response Plan, etc.
- The E&S Specialists will ensure that work contracts contain adequate resources for effective implementation of E&S instruments.
- The E&S Specialists will provide necessary support to the contractor e.g. training, mentoring, coaching, sharing of relevant information and documents etc. to enable the contractor deliver on E&S issues.

- The supervising consultant/engineer, if any, will directly supervise contractors' implementation of applicable plans and safeguard documents on the field.
- The supervising consultant/engineer will advise the PMU (MPW) and Liberia Urban Resilience Project LURP (PMU-MPW) on issues of E&S non-compliance or infringements on the part of the contractor and advise on necessary contractual sanctions and reliefs available to the Ministries.

Step 10: Monitoring of ESMPs Implementation and Reporting

- The PMU and LURP will undertake scheduled field visits to the construction sites to inspect work progress and get updates from both the supervising consultant/engineer and the contractor on work progress. Such field visits will be agreed among parties and be made a part of the contract. The E&S Specialists will use the visits to undertake a comprehensive field inspection and monitoring and communicate any findings (positives and negatives) to the supervising consultant and contractor.
- The supervising consultant/engineer at their discretion will organize scheduled and ad hoc E&S monitoring at construction sites and prescribe appropriate corrective actions to the contractor. Such monitoring will be communicated to the PMU/LURP through the consultant's regular reports.
- Where necessary, the E&S Specialists may organize ad hoc field monitoring in instances where it will enhance positive outcomes on E&S compliance.

Table 12 summarizes the Environmental and Social Screening Procedure and Responsibility.

Table 12: Summary of Environmental and Social Screening Procedure and Responsibility

No.	Stage	Institutional responsibility	Implementation responsibility
1.	Screening of sub-projects including screening for biodiversity and climate resilience in project sites to assist in determining level of environmental and social assessment required	MPW-PMU	Project Focal Points at Communities E&S Specialists of PMU and MPW
2	Statutory Registration of projects with EPA	MPW-PMU	E&S Specialists of PMU and MPW
3.	Determination of appropriate environmental and social assessment level/ category	EPA/MPW	E&S Specialists of PMU and MPW
4	E&S Risks categorization validation	World Bank	E&S Specialists of World Bank
5.	If ESIA is necessary		
5.1	Preparation of Terms of Reference (TOR)	PMU MPW	E&S Specialists of PMU/MPW
5.2	Selection of Consultant	PMU/MPW Procurement Unit	Procurement Specialist, E&S Specialists of PMU/MPW
5.3	Realization of the ESIA, Public consultation and participation, integration of environmental and social issues and mitigations into project	ESIA Consultant/	E&S Specialists of PMU/MPW, Procurement Specialist

No.	Stage	Institutional responsibility	Implementation responsibility
	designs, and in tendering/bidding documents		
6.	Review and Approval	EPA/ World Bank	-
7.	Participatory public consultation and disclosure	MPW, EPA	E&S Specialists of PMU and, ESIA Consultant
8.	Implementation of environmental and social assessment and management plan	Sub-project beneficiaries/contractors	E&S Specialists of PMU and LURP
9.	Development of participatory monitoring indicators	PMU/MPW,	E&S Specialists of PMU and LURP; M&E Specialist
10.	Surveillance and participatory monitoring	MIPD/MPW, EPA	E&S Specialists of PMU and LURP; M&E Specialist

5.3 Subprojects requiring a proportionate ESMP

The E&S Standards Officer will prepare or supervise the preparation of proportionate site-specific subproject ESMPs. As defined in Annex 1, E of ESS1, the ESMPs will consist of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a subproject to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to an acceptable level. The proportionate site-specific ESMPs will meet the relevant ESF requirements, and also incorporate the subproject specific measures arising from the LMP and the SEA/SH Prevention and Response Action Plan, and SEP prepared for the Project.

The proportionate site-specific ESMP will be prepared according to the following table 13:

Table 13: ESMP Summary Sheet

<i>Subproject Name</i>	
<i>Subproject Location</i>	
<i>Risk level (low, moderate, substantial or high)</i>	
<i>Date of the field visit</i>	
<i>Consultation Summary</i>	
<i>Observations/Comments</i>	
<i>Signature of ESSO</i>	
<i>Date</i>	

5.4 Subproject Description

- *Nature and scope of activities, particularly construction works. Include all the technical details that are relevant to understanding the environmental and social risks and impacts of the subproject.*
- *Location, including a map. If the subproject includes multiple locations, then the particulars of each location must be provided.*

5.5 Environmental and Social Baseline

- *Provide all the necessary information required to understand the environmental and social risks and impacts of the subproject.*
- *Provide enough pictures to illustrate environmental and social issues, with appropriate legends.*

5.6 Environmental and Social Risks and Impacts

- *Describe the environmental and social risks and impacts, based on the risks and mitigation measures identified in Risk and Mitigation Chapter*

5.7 Consultations

- *Detail how the PMU has engaged with affected and concerned stakeholders of the subproject, through the process of stakeholder engagement described in the Project (SEP).*

In particular, the PMU will initiate consultations to inform stakeholders about the activities to be undertaken, their timetable and possible impacts, as well as the subproject specific grievance mechanism procedures.

The consultations shall include the communities and persons that might be negatively affected, and not only beneficiaries or interested and concerned parties.

The consultation process will take in account the sociocultural context of Liberia.

Consultations can take the form of focus groups, discussions with elders/community leaders, or interviews.

The consultations should be carried out in a safe place taking into account security risks.

- *Conduct separate consultations for women in order to ensure that any special concerns and needs are taken into account during the preparation of the safeguard instruments*
- *Ensure that Project Affected Persons (PAPs) are not exposed to risks as part of their participation in subproject consultations, for example by not disclosing personal information/photos.*
- *Document all subproject specific consultations (date, location, list of participants, affiliations, topics discussed, issues raised, and conclusions).*
- *Indicate how stakeholder comments, suggestions, concerns, and expectations were addressed in the site-specific proportionate ESMP*
- *Include photos of consultation events*

5.8 Mitigation Instruments

- *Propose and implement differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and ensure that they are not disadvantaged in sharing any development benefits and opportunities resulting*
- *Refer to the ESHS requirements (Annex 2), including the Solar PV Code of Practice, and attach them to the ESMP*
- *Highlight the ESHS requirements to which subproject contractors must pay the greatest*

attention. If necessary, the ESMP will “proportionalize” the ESHS requirements to the subproject’s nature, scope, the specific environmental and social risks, and the number of workers involved. For example, the ESMP might need to specify for small contracts the type of PPE, or the contents of First Aid Boxes.

- If necessary, indicate additional requirements that will be applicable to the subproject contractor.
- Indicate the mitigation measures that the PMU will implement to address the environmental and social risks and impacts not associated with contractors including legacy issues, and technical assistance.
- Detail subproject specific measures required for the subproject to be in accordance to the Project Labor Management Procedures (LMP)
- Detail subproject specific measures required for the subproject to be in accordance with the Project SEA/SH Prevention and Response Action Plan
- Provide a subproject specific monitoring plan that indicates what parameters will be monitored, how they will be monitored, who will monitor them, and how frequently they will be monitored.
- Detail any training provided by the PMU to the contractors and their workers.

5.9 Budget

Provide a budget for the mitigation measures to be implemented by the PMU. The cost to contractors of meeting the ESHS requirements will be included in their respective contracts.

5.10 Incorporating ESHS requirements in contracts

LURP will for each subproject:

- Reference the ESHS requirements (Annex 3) in Requests for Proposals and Invitations to Bid
- Require that bidders submit a preliminary environmental and social plan as part of their bids, describing the principles and methodology they will use to address relevant ESHS issues during the contract, and include all costs associated with managing environmental and social issues in their bids.
- Consider during the selection process the quality of the preliminary environmental and social plan, the bidders' past environmental and social performance, and the ability of the bidder to manage environmental and social issues
- Require that selected contractors prepare a Contractor Environmental and Social Management Plan (C-ESMP) that details how the relevant ESHS requirements will be implemented, including personnel, taking into account the site-specific proportionate ESMP prepared by UNOPS for the subproject
- Approve the C-ESMP before the start of activities
- Use the C-ESMP as the benchmark when monitoring and evaluating the contractor’s environmental and social performance

Contractors will be contractually obligated to fully implement their respective C-ESMPs.

5.11 Environmental and Social Liabilities of Contractors

LURP will hold Contractors accountable for their environmental and social performance, as well as any

environmental or social damage or prejudice caused by their staff, by including the following measures in bidding documents and contracts:

- Mitigation measures to be included in the contract will be specified in the subproject ESMP prepared by the LURP.
- Any impact that is not properly mitigated will be the object of an environmental/social notice by the LURP.
- For minor infringements and social complaints, an incident which causes temporary but reversible damage, the contractor will be given a notice to remedy the problem and restore the environment. No further actions will be taken if LURP confirms that restoration is done satisfactorily.
- For social notices, the Project engineer will alert the contractor to remedy the social impact and to follow the issue until solved. If the contractor does not comply with the remediation request, work will be stopped and considered under no excused delay.
- If the contractor has not remedied the environmental impact during the allotted time, LURP will stop the work and give the contractor a notification according to the non-complied mitigation measure that was specified in the bidding document.
- No further actions will be required if LURP sees that restoration is done satisfactorily. Otherwise, if Contractor hasn't remedied the situation within one day any additional days of stopping work will be considered no excused delay
- Environmental notifications issued by LURP might include one or more environmental penalty.
- In the event of repeated noncompliance, LURP will bring the environmental and social notices history to its procurement in order to take legal action.

5.12 Progress Reporting

As part of reporting requirements under the LURP, the progress reporting input on ESMF will take place at three main levels:

- **Reporting by Contractors to Supervising Consultants:** During the implementation of the subprojects, all contractors shall submit monthly progress reports to respective Supervising consultants detailing ESHS performance. The monthly report shall include provisions for ESHS performance management on sites including training, incident investigation, inspection and audit findings. Details of the contractor's reporting requirements can be found in Annex 5: Contractor Environmental and Social Reporting
- **Reporting by Supervising Consultants to the PMU:** The monthly and ad-hoc reporting will integrate information on environmental and social risks management based on their day-to-day supervision of the works and the information provided by Contractors.
- **Reporting by PMU to World Bank:** The PMU will provide on a quarterly basis or as needed, and as part of the LURP progress report, and information on implementation of ESMF to WB including supervision missions and the project's mid-term review.

5.13 Environmental Media Monitoring Plan

An environmental media monitoring plan (Table 14) will be prepared by the PMU. The monitoring plan will be used to track the implementation of the environmental safeguards measures provided by the contractor.

Table 14: Environmental media monitoring plan

Environmental Media	Parameters	Frequency	How to Monitor
Air quality	Sulfur dioxide (SO ₂) Nitrogen dioxide (NO ₂) Particulate Matter PM ₁₀ Particulate Matter PM _{2.5}	Weekly	Compare results with WHO Ambient Air Quality Guidelines
Water and wastewater discharges	pH BOD COD Total nitrogen Total phosphorus Oil and grease Total suspended solids Total coliform bacteria	Monthly	Compare results with IFC indicative values for treated sanitary discharges
Noise	Noise level for Industrial and commercial areas (70dB)	Daily	Compare results with IFC indicative Noise Level Guideline
Contaminated soil / dredged materials during	Concentration of Lead (Pb), Copper (Cu), Cadmium (Cd), chromium (Cr), Zinc (Zn), Arsenic (As), Mercury (Hg), Nickel (Ni)	Monthly	Monitoring of key metals and trace metals from the dredged material and compare with WHO standards and guidelines for exposure

5.14 Contractor Environmental and Social Reporting

The Contractor shall monitor, keep records and report on the following environmental and social issues:

- *Safety*: hours worked, lost time injury (LTI), lost workdays, recordable incidents and corresponding Root Cause Analysis (lost time incidents, medical treatment cases), first aid cases, high potential near misses, and remedial and preventive activities required (for example, revised job safety analysis, new or different equipment, skills training, and so forth).
- *Environmental incidents and near misses*: environmental incidents and high potential near misses and how they have been addressed, what is outstanding, and lessons learned.
- *Major activities*: those undertaken and completed, progress against project schedule, and key work fronts (work areas).
- *ESHS requirements*: noncompliance incidents with permits and national law (legal noncompliance), project commitments, or other ESHS requirements.
- *ESHS inspections and audits*: by the Contractor, LURP, or others—to include date, inspector or auditor name, sites visited and records reviewed, major findings, and actions taken.
- *Workers*: list of workers at each site, confirmation of ESHS training, indication of origin (expatriate, local, nonlocal nationals), gender, age with evidence that no child labor is involved, and skill level (unskilled, skilled, supervisory, professional, management).
- *Training on ESHS issues*: including dates, number of trainees, and topics.
- *Footprint management*: details of any work outside boundaries or major off-site impacts caused by ongoing activities—to include date, location, impacts, and actions taken.
- *External stakeholder engagement*: highlights, including formal and informal meetings, and information disclosure and dissemination—to include a breakdown of women and men consulted and themes coming from various stakeholder groups, including vulnerable groups (e.g., disabled, elderly, children, etc.).
- *Details of any security risks*: details of risks the Contractor may be exposed to while performing its work—the threats may come from third parties external to the project.
- *Worker grievances*: details including occurrence date, grievance, and date submitted; actions taken and dates; resolution (if any) and date; and follow-up yet to be taken—grievances listed should include those received since the preceding report and those that were unresolved at the time of that report.
- *External stakeholder grievances*: grievance and date submitted, action(s) taken and date(s), resolution (if any) and date, and follow-up yet to be taken—grievances listed should include those received since the preceding report and those that were unresolved at the time of that report. Grievance data should be gender-disaggregated.
- Major changes to Contractors environmental and social practices
- *Deficiency and performance management*: actions taken in response to previous notices of deficiency or observations regarding ESHS performance and/or plans for actions to be taken should continue to be reported to LURP until it determines the issue is resolved satisfactorily

The Contractor shall report major work-related incidents, accidents or loss of life to LURP and WB **within 24 hours** of their occurrence.

5.15 Reporting of Severe incidents or accidents

The PMU will notify the World Bank of any incident or accident related to the Project, which has, or is likely to have, a significant adverse effect on the environment, the targeted communities, the

public or contracted workers and consultants including security incidents, sexual exploitation and abuse and sexual harassment (SEA/SH) among others, within 24 hours after learning of the incident or accident, followed by an initial report within 10 days indicating possible root causes and proposing possible corrective actions.

The PMU will provide within 30 days after the notification details of the incident or accident, indicating immediate measures taken or that are planned to be taken to address it, and including any information provided by any contractor or supervising entity, as appropriate. Subsequently, as per the World Bank's request, the PMU will prepare a Summary report on the incident or accident that includes: (i) a description of the incident or accident, (ii) the measures that the PMU is taking or plans to take to address the incident or accident and to prevent any future similar event, and (iii) an identification of any part of the information for which confidentiality is required

6.0 CHAPTER SIX: PUBLIC CONSULTATION AND PARTICIPATION

6.1 Overview

The World Bank's Environmental and Social Standards - ESS 10 (Stakeholder Engagement and Information Disclosure) provides that project-affected groups and stakeholders should be consulted on the project's potential environmental and social impacts during the ESIA process. The consultation process gives stakeholders and Project Affected Persons (PAPs) an opportunity to learn about the project, raise concerns, understand the potential effects, and comment on the project design as well as on the reports that are produced during each phase.

6.2 Purpose and Objectives Stakeholder Engagement and consultation

The purpose of Stakeholder Consultation and Information Disclosure Mechanism is to:

- Inform: Promote stakeholder understanding of issues, problems, alternatives, opportunities and solutions through balanced and objective information sharing;
- Consult: To obtain feedback and acknowledge concerns and aspirations of stakeholders on analysis, alternatives, and decisions with regard to EASTRIP;
- Engage: Work directly with stakeholders to ensure that their concerns and aspirations are understood and considered and to assure them that their concerns / aspirations would be directly reflected in the developed alternatives; and that feedback will be provided on how their input influenced the final decision.
- Empower: Make stakeholders partners in each aspect of the decision, including development of alternatives and identification of preferred solution so as to ensure ownership of subprojects at grassroots level.

The main objectives of the stakeholder engagement are:

- To establish a systematic approach to stakeholder engagements that will help to identify stakeholders, build and maintain a constructive relationship with them, in particular project-affected parties.
- To identify key stakeholders that are affected, and/or able to influence the Project and its activities.
- To assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance.
- To promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle on issues that could potentially affect them.
- To ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format.
- To provide project-affected parties with accessible and inclusive means to raise issues and grievances and allow Borrowers to respond and manage such grievances.
- To define the information disclosure provisions under the project

- To define roles and responsibilities for the implementation of the SEP
- To define the reporting and monitoring arrangements to ensure that the SEP remains an effective and up-to-date tool for stakeholder engagement, including periodic review of SEP performance

6.3 Stakeholder Identification and Analysis

Stakeholders are defined as persons or groups who are directly or indirectly affected by a project, as well as those who may have interests in a project and/or the ability to influence its outcome, positively or negatively. Based on this definition, the stakeholders may include locally affected communities, central government and local officials, and other special interest groups.

6.4 Stakeholder Identification

LURP stakeholders can be grouped into:

- **Primary stakeholders:** Individuals, groups or local communities that may be affected by the project, positively or negatively and directly or indirectly especially those who are directly affected, including those who are disadvantaged or vulnerable.
- **Secondary stakeholders:** Broader stakeholders who may be able to influence the outcome of the project because of their mandate, relationship and knowledge about the project, affected communities or political influence.

For the purposes of effective and tailored engagement, stakeholders of LURP Program can be divided into the following core categories:

- **Affected Parties** – persons, groups and other entities within the Project Area of Influence (PAI) that are directly influenced (actually or potentially) by the project and/or have been identified as most susceptible to change associated with the project, and who need to be closely engaged in identifying impacts and their significance, as well as in decision-making on mitigation and management measures. The stakeholders in this category identified for this project include:
 - Members of poor communities
 - Petty trader male and female
 - Project Affected Persons
 - Community Development Authority
 - Communities development in the area of the project’s planned activities who will be the recipients/beneficiaries of the project.
- **Other Interested Parties** – individuals/groups/entities that may not experience direct impacts from the Project but who consider or perceive their interests as being affected by the project and/or who could affect the project and the process of its implementation in some way.

The stakeholders in this category identified for this project include:

The local population who can benefit indirectly from the project

- Public in targeted urban communities areas as well as key social institutions such as councils, women’s groups (Public Awareness Campaign), academia/universities, etc.

- Ministry of Finance and other government agencies including the Ministry of Health, Ministry of Education and local government institutions.
- Provincial government institutions at regional level involved with the project stakeholders and playing key role in preparation and implementation of the project. This include community leaders, superintendent, community leaders and local authorities
- Residents and laborers, contractors and sub-contractors, and individual in the area of the project;
- Local, regional and national level civil societies and non-governmental organizations (NGOs) with an interest in areas of urban development and may have in-depth knowledge about the environmental and social characteristics of the project area and the nearby populations, and can help play a role in identifying risks, potential impacts, and opportunities for consider and address in the assessment process.
- Media and other interest groups, including social media

- **Vulnerable Groups** – persons who may be disproportionately impacted or further disadvantaged by the project(s) as compared with any other groups due to their vulnerable status and that may require special engagement efforts to ensure their equal representation in the consultation and decision-making process associated with the project. The stakeholders in this category identified for this project include:

Elderly/ Aged group

- Persons with disabilities and their caregivers
- Low-income families/extreme poor and especially female headed households
- Nomadic communities
- Women, particularly women-headed households or single mothers with underage children with low mobility and living in hard to reach communities;
- Youth;
- Petty traders low or no education;
- Daily wage earners in the agricultural value chain

Special efforts will be taken to disseminate project information to these groups and to ensure their inclusion in the stakeholder engagement process. Vulnerable groups and individuals will be updated and consulted through dedicated means, as appropriate throughout the project life cycle.

This section identifies key stakeholders, including individuals, groups, or communities who will be affected or who may have an interest, and who will be informed and consulted about the project. It also identifies and assesses the needs of some disadvantaged or vulnerable individuals or groups, who may have limitations in participating and/ or in understanding the project information or in participating in the consultation process. Based on this assessment and considering other aspects including stakeholder requirements/ needs and interests, the stakeholder list below is categorised as (i) affected parties; (ii) actors; (iii) other interested parties; and (iv) disadvantaged/ vulnerable individuals or groups. The stakeholder list is a 'living document' which will be updated regularly throughout the project life as appropriate.

See table 15 for the list of affected stakeholders and level of impact.

Table 15: List of Affected Stakeholders and Level of Impact

Type of Stakeholder	Level of Impact		
	High Impact	Medium impact	Low Impact
Affected	Single Women, Small & medium scale business, petty traders- investors, cooperative & micro, Youth group	LLA, Commence MPW, EPA, MCC, PCC, LWSC, LEC, NDMA, LMA and NHA	<ul style="list-style-type: none"> ➤ Civil Society Organizations (CSOs) ➤ Non-Governmental Organizations (NGOs) ➤ Contracted Third Parties ➤ Service Provider
Other Actors	<ul style="list-style-type: none"> ➤ Liberia Marketing Association ➤ Religious Organization ➤ Educational Sector 		
Other Interested	Environmental Protection Agency (EPA) Development Partners Financial Institutions Community Based Organisations (CBOs) Sector Working Group (development partners, CSOs, private sector and academia)	<ul style="list-style-type: none"> ➤ Parliament/ House of Assembly ➤ Media Group 	<ul style="list-style-type: none"> ➤ Civil Society Organizations (CSOs) ➤ Non-Governmental Organizations (NGOs) ➤ Contracted Third Parties
Vulnerable	<ul style="list-style-type: none"> ➤ Persons with Disabilities (PWDs) ➤ Aged/elderly ➤ Women ➤ Youth ➤ Persons living in poor farming communities Homeless/displaced persons		

Cooperation and negotiation with the stakeholders throughout the Project development often also require the identification of persons within the groups who act as legitimate representatives of their respective stakeholder group, i.e. the individuals who have been entrusted by their fellow group members with advocating the groups' interests in the process of consultation with the Project. Community representatives may provide helpful insight into the local settings and act as main conduits for dissemination of the Project-related information and as a primary communication/liaison link between

the Project and targeted communities and their established networks. Verification of stakeholder representatives (i.e. the process of confirming that they are legitimate and genuine advocates of the community they represent) is an important task in establishing contact with the community stakeholders. Legitimacy of the community representatives can be verified by talking informally to a random sample of community members and heeding their views on who can be representing their interests in the most effective way.

6.5 Stakeholder Analysis

In order to develop an effective plan for managing stakeholders, the stakeholders first need to be clearly identified and assessed. Stakeholders will be identified by performing a stakeholder analysis in which potential stakeholders and relevant information (proximity to the project, interests, involvement, interdependencies, influence, and potential impacts on project lifecycle) are gathered, documented and analyzed.

Some of the key stakeholders are identified below in table 16.

Table 16: List of Key stakeholders of LURP

Stakeholder Group	Institutions/Group	Topic of Consultation	Method of Engagement	Responsibility
Government agencies Liberia Water and Sewer Corporation (LWSC), Liberia Electricity Corporation (LEC), Environmental Protection Agency (EPA), National Housing Authority (NHA), National Disaster Management Agency (NDMA), LMA, LLA, and the Ministry of Transport. A lack of financial resources affects the efficient delivery of MCC and PCC's	Ministry of Finance Implementing partners, Ministry of Public Works Ministry of Commerce, Ministry of Finances Development Planning, Ministry of Internal Affairs and Environmental Protection Agency	Design of the project including Project objectives, scope, preparation timelines, costing and budgeting, Sectoral and Institutional context, Project implementation arrangement	Project preparation and Technical Review Meetings through Video Conference (VC)/WebEx meetings	MPW/PMU/LURP
	Environmental Protection Agency	Discussion on the implementation and monitoring of the following environmental tools ESMF,SEP,RP,EIA,GBV Action Plan	Face to Face interview with the Director for Compliance at the EPA Along with the Manager for MEA	MPW/LURP
	LLA	Discussion on the implementation and monitoring of the following environmental tools ESMF,SEP,RP,EIA,GBV Action Plan	Face to Face interview with the Director for Compliance at the EPA	MPW/LURP

			Along with the Manager for MEA	
County Level Stakeholder	Chiefs, farmers, women groups, PAPs	Project activities and environment and social risks and impacts and mitigation measures, project Implementation & Arrangement; COVID-19 prevention measures under the project	Discussion/ presentation/ information sharing	Consultant/M A/LURP of MPW
Private sector Actors	LMA Liberia Marketing Association	activities and environment and social risks and impacts and mitigation measures, project Implementation & Arrangement; COVID-19 prevention measures under the project	Discussion/ presentation/ information sharing	Consultant/M PW/LURPP, MOH
Development Partners	World Bank	Design of the project including Project objectives, scope, preparation timelines, costing and budgeting, Sectoral and Institutional context, Project implementation arrangement		
Academia/ Research Institutions	UL, CUC and MCC	Project implementation arrangement ,presenting project documentation such as ESMF,SEP,RP,EIA,GBV Action Plan	Discussion/ presentation/ information sharing	Consultant/M PW/LURP of MPW ,MOH
CSOs/ NGOs	Civil Society Organizations, NGOs	COVID-19 prevention		

6.6 Methodology for Stakeholder Engagement

In order to meet best practice approaches, the project will apply the following principles for stakeholder engagement:

- **Openness and life-cycle approach:** public consultations for the project(s) will be arranged during the whole lifecycle, carried out in an open manner, free of external manipulation, interference, coercion or intimidation;
- **Informed participation and feedback:** information will be provided to and widely distributed among all stakeholders in an appropriate format; opportunities will be provided for communicating stakeholders' feedback, for analysing and addressing comments and concerns;

- **Inclusiveness and sensitivity:** stakeholder identification will be undertaken to support better communications and build effective relationships. The participation process for the projects will be inclusive. All stakeholders at all times will be encouraged to be involved in the consultation process. Equal access to information will be provided to all stakeholders. Sensitivity to stakeholders' needs will be the key principle underlying the selection of engagement methods. Special attention will be given to vulnerable groups, in particular single women, persons with disabilities, youth, and elderly those living in remote or inaccessible areas.

6.7 Summary of stakeholder consultation during project preparation (including SEP, ESMF, RPF, ESIA and RP preparation)

The following tables 17 and 18 summarizes the key outcomes for stakeholder engagement during preparation of this ESMF.

Table 17: Outcomes of Key Stakeholder Consultative Meeting at Government Ministries and Agencies

STAKEHOLDERS	INSTITUTIONS	DATES	FEEDBACK
Wisdom Fayiah	WASH COMMISSION	February 21, 2022	<p>Concerns</p> <ol style="list-style-type: none"> 1. What types of promotional messages will be sent out by the World Bank during the bidding for contracts? <p>Recommendations</p> <ol style="list-style-type: none"> 2. The WASH commission is a regulatory body that deals with the quality of water. Hygiene Promotion and other awareness should be key. 3. <i>An alarm system should be establish to provided community members with the timing of flooding</i> 4. <i>The project should assist women by providing microloans and construction of a vocational schools for women empowerment;</i> 5. WASH commission should be knowledgeable about the bidding process to help in the selection of professional and qualified companies to do the work.
Moses Saah Tandanpolie	LWSC	February 21, 2022	<p>Key Issues discussed</p> <ul style="list-style-type: none"> • Environmental • Social • Health <p>Concerns:</p> <ol style="list-style-type: none"> 1. Is the project going to have an alarm system or a contingency plan? 2. What types of drainage are going to be built? 3. Will the kiosk get water from the LWSC? 4. Is there going to be a budget for the cleaning of the proposed drainage if then who is going to save that money? 5. Is the project going to create training and build capacity for community dwellers for the operation and maintenance of the facility? <p>Recommendations</p> <ul style="list-style-type: none"> * The project should work with the EPA and MCC on the issue of final waste disposal. * The project should have a stand along water system in place/reservoirs for water storage

STAKEHOLDERS	INSTITUTIONS	DATES	FEEDBACK
			<ul style="list-style-type: none"> * The project can also have a biodigester system that is better for now * The water that will be affordable, should meet the demand of the flood prone communities * Is there going to be a budget for the cleaning and operation of the proposed drainage, if yes, the money should be placed into a private account? * The facility should be affordable and should have solar energy for its safety. * Also, the issue of community awareness programs for the operation, construction of the feasibility, and the water should undergo water quality testing and treatment
Daoda Socrates Carlton	EPA	February 21, 2022	<p><u>Concerns</u></p> <ul style="list-style-type: none"> • What are the method the bank using to suck the waste from the drain <p><u>Recommendations</u></p> <ol style="list-style-type: none"> 6. A wider culvert will filter system to reduce the waste in the drainage to avoid the issues of flooding 7. flooding remains a challenge to many socio-economic issues 8. Communities should be involve in the cleaning of the proposed drainages. 9. Education should be provided to community members on environmental and operation of the proposal site 10. The project should bring all ministries and agency involved with the project on board
Franco Bridge Grimes Abraham B.Y Garnoe Boye A. Robertson	MCC	February 20,2022	<p><u>Concerns</u></p> <ul style="list-style-type: none"> • Will the water kiosks have energy sources that will be more modern? <p><u>Recommendations</u></p> <ul style="list-style-type: none"> • The water kiosks to be constructed should be in line with the water and Sewage water plan • The kiosks should be monitor by the (MCC) based on the management and safety of the structure.

STAKEHOLDERS	INSTITUTIONS	DATES	FEEDBACK
			<ul style="list-style-type: none"> The project should have a clear SOP that will be accountable to the MCC MCC to work with the project to have the land deal of those sites. The design of these kiosks should be view by the MCC before construction The project should develop a clear SOP for waste management.
James Morlu Kennedy - Stanley Zahn	PCC	February 19, 2022	<p>Concerns</p> <ol style="list-style-type: none"> 1 People ignore zoning regulations and build in places that are unauthorized 2 over the past years Paynesville lacks drainage system 3 Omega Market area (for this area the ground absorbs the water at a faster rate), how is the project going to handle this? 4 Major areas that flooding occurs in Paynesville City does not contain much Community dwellers <p>Recommendations</p> <ul style="list-style-type: none"> Citizens should submit land deeds before carrying out construction to ensure that the land is situated in an authorized place The project should employ Community Participatory Approaches, especially for infrastructures

Table 18: Outcomes of Stakeholder Consultative Meeting in community

Key outcomes of Stakeholder Consultative Meetings			
Stakeholder Community	Date	Issues Raised	Response Provided
Omega Tower Community Leadership	February 3, 2022	<ul style="list-style-type: none"> Beneficiaries asked if the project will provide resettlement compensation to project affected persons (PAPs) and will it be fairly and timely? How is the project going to handle the economic aspect of the project during the operational phase of the project The participants inquired as to whether compensation will be 	<ul style="list-style-type: none"> The Project will only provide resettlement package to people who properties will be affected during project implementation. <p>During the operational phase, the project is going to be community driven, in that the sustainability aspect of the project is going to rest on the</p>

Key outcomes of Stakeholder Consultative Meetings			
Stakeholder Community	Date	Issues Raised	Response Provided
		<p><i>done for all within the project area during subproject implementation.</i></p> <ul style="list-style-type: none"> <i>The participants inquired whether all components of the project will be implemented in all communities that are part of the studies.</i> 	community and its leadership along with other key institutions.
GSA Community Leadership / Duport Rd Area	February 4, 2022	<ul style="list-style-type: none"> Some of the existing challenges these communities faced are: no access to purify drinking water and poor draining facilities and waste management site for waste disposal. Beneficiaries asked how is the project going to address environmental issues like climate change and risk associated with civil works and other risk such as gender and social issues <i>The participants inquired as to whether the EPA will be involved in the project.</i> <i>How will the affected structure be identified?</i> 	<ul style="list-style-type: none"> The project will construct drainages in project communities and construct drinking water facility for selected communities. Knowing that the issues of climate change is currently impacting the communities through flooding and poor drainages facilities and growth, the project will train project beneficiaries on climate adaptation measures and substantiality approach. As it relate to gender issues the project is developing a framework for GBV action plan that will address all gender related issues and the GM will be establish to address complaint from project affected persons.
The Leadership Central Monrovia/Soniwein	February 5, 2022	<ol style="list-style-type: none"> <i>Will the drainage channel be like that of Soniwein?</i> <i>Participants inquired as to whether the project will yield results considering the failure</i> 	All component of the project is going to be implemented in all proposal project communities

Key outcomes of Stakeholder Consultative Meetings			
Stakeholder Community	Date	Issues Raised	Response Provided
		<p><i>of the PCC to implement zoning order</i></p> <p>13. <i>The participants inquired as to whether the EPA will be involved in the project.</i></p> <p>14. <i>How will the affected structure be identified?</i></p> <p>15. <i>What compensation mechanisms will be put in place to address structures that are partially affected.</i></p> <p>16. <i>The participants inquired as to whether compensation will be done for all within the project area during subproject implementation.</i></p> <p><i>The participants inquired whether all components of the project will be implemented in all communities that are part of the studies</i></p> <p>Beneficiaries asked if the Project will provide capacity to support institutions for delivery of services during implementation</p>	
Northern Bushrod Island	February 6, 2022	<p>17. <i>Participants inquired as to whether the project will yield results considering the failure of the PCC to implement zoning order</i></p> <p>18. <i>The participants inquired as to whether the EPA will be involved in the project.</i></p> <p>19. <i>How will the affected structure be identified?</i></p> <p>20. <i>What compensation mechanisms will be put in place to address structures that are partially affected.</i></p> <p>21. <i>The participants inquired as to whether compensation will be done for all within the project area during subproject implementation.</i></p>	<p>The Project will only provide resettlement package to people who properties will be affected during project implementation.</p> <p>The project will provide access to finance gaps for small & medium size petty traders who businesses will be disturbed during project implementation</p>

Key outcomes of Stakeholder Consultative Meetings			
Stakeholder Community	Date	Issues Raised	Response Provided
		<p>22. <i>The participants inquired whether all components of the project will be implemented in all communities that are part of the studies.</i></p>	
<p>Northern Bushrod Island (New Kru Town, Beer Factory, Duala North, and Logan Town)</p>	<p>February 7, 2022</p>	<ul style="list-style-type: none"> • <i>Participants inquired what type of culvert will be installed to address the issue of flooding</i> • <i>Participants inquired as to whether compensation will be done for all within the project area during subproject area implementation.</i> <p>Beneficiaries asked if the project will provide financial support to women groupings to enhance their economic abilities</p> <ul style="list-style-type: none"> • <i>Beneficiaries asked if the project will provide financial support to women groupings to enhance their economic abilities</i> • <i>The participants inquired whether compensation will be done for tenants.</i> <p>23. <i>The participants inquired whether all components of the project will be implemented within the area</i></p>	<p>The project will provide access to finance gaps for small & medium size petty traders who businesses will be disturbed during project implementation</p>

6.8 Stakeholder Engagement Program for the LURP

Adequate stakeholder consultations will require effective timing and advanced planning. To ensure information is readily accessible to affected stakeholders, and adequate representation and participation of the different groups in the process, the Project will adopt different methods and techniques based on an assessment of stakeholder needs

Covid-19 Measures

A precautionary approach will be taken to the consultation process to prevent infection and/or contagion, given the highly infectious nature of COVID-19. The following are some considerations for selecting channels of communication, in light of the current COVID-19 situation:

- Avoid public gatherings (taking into account national restrictions or advisories), including public hearings, workshops and community meetings;
- If smaller meetings are permitted/advised, conduct consultations in small-group sessions, such as focus group meetings. If not permitted or advised, make all reasonable efforts to conduct meetings through online channels;
- Diversify means of communication and rely more on social media and online channels. Where possible and appropriate, create dedicated online platforms and chat groups appropriate for the purpose, based on the type and category of stakeholders;
- Employ traditional channels of communications (TV, newspaper, radio, dedicated phone-lines, and mail) when stakeholders do not have access to online channels or do not use them frequently. Traditional channels can also be highly effective in conveying relevant information to stakeholders, and allow them to provide their feedback and suggestions;
- Where direct engagement with project affected people or beneficiaries is necessary, identify channels for direct communication with each affected household via a context specific combination of email messages, mail, online platforms, dedicated phone lines with knowledgeable operators; other traditional means of communication should be deployed such as dialects and local vernacular messages.

Each of the proposed channels of engagement would clearly specify how feedback and suggestions can be provided by stakeholders. This will be revised to include other methods of engagement as the situation improves during implementation. The methods of engagement are listed in Tables 19 and 20 below:

Table 19: Stakeholder Engagement Methods

Engagement Technique	Description and use	Target audience
Websites	The Project PAD and PIM, as well as the ESMF, RPF, ESCP, and SEP, ESIA and RP, procurement, tender Action Plan GAP / Implementation progress and other relevant project documentation will be published on the official websites of MPW and other relevant implementing agencies	All stakeholders
Media announcements	Advance announcements of commencement of major project activities, project Grievance Mechanism, and other outreach needs of the project e.g. sensitization on beneficiary selection criteria and enrolment processes	All implementing actors at national, and county levels;

		Project-affected stakeholders and communities
Information Boards	Use of public notice boards in project communities for announcement of commencement and progress for major project activities. IEC materials on COVID-19 will also be displayed on these Boards.	Project-affected communities IA County Offices
Sensitization on beneficiary selection criteria and enrolment meetings	These meetings will be held at the community level whilst observing COVID-19 social distancing protocols to orient potential beneficiaries on the project's eligibility criteria and planned activities. These community sensitization meetings and consultations will include discussions around potential environmental risks and impacts of project activities and proposed mitigation measures, as well as compliance with COVID-19 protocols should the pandemic persist.	Project-affected communities
Community durbars/ public meetings	These interactive platforms will be used to convey general information on the Project to to a large group of stakeholders, especially communities e.g. project environmental and social risks and mitigation measures, grievance mechanisms available for affected and interested parties to submit complaints and to obtain information, make enquiries, or provide their views and feedback on the project; and to provide regular updates on implementation progress to county and national level stakeholders in order to build relationship with the communities, especially with vulnerable people and to distribute non-technical information (as required). . These meetings will also be used to create more awareness and education on COVID-19 protocols and compliance.	Project-affected communities and any other stakeholders and interested parties Community Actors
Correspondence by phone/ email/ written letters	Distribute project information to government officials, organizations, agencies and companies and invite stakeholders to meetings	Government officials, NGOs, CSOs, CBOs, trade associations, Development Partners
Printed media advertisement	This will be used to disseminate and disclose project documents intended for general readers and audience (e.g., ESMF, RPF, ESCP, SEP, ESIA, RP) Advertise project procurements, as applicable	General public

Distribution of printed public materials: Project information leaflets, brochures, fact sheets and other IEC materials	This will be used to convey general information on the Project and to provide regular updates on its progress to county and national stakeholders. IEC materials on COVID-19 will be distributed to create more awareness about the global pandemic.	General public
Internet/ Digital Media	The official websites of MPW and related implementing agencies will be used to promote various information and updates on the overall Project, impact assessment and impact management process, procurement, as well as the Project's engagement activities with the public.	Project stakeholders and other interested parties that have access to the internet resources.
One-on-one interviews/meetings	This will be used to solicit views and opinions on project activities, challenges, solutions and impacts as appropriate whilst observing the prevailing COVID-19 social distancing protocols. This is to enable stakeholder to speak freely about sensitive issues and build trust in the project.	Project beneficiaries and non-beneficiaries, other vulnerable individuals, CSOs, NGOs, DPs etc.
Workshops/ formal technical meetings	This channel will be used to: (i) Present project information to stakeholders; (ii) Allow stakeholders to provide their views and opinions; (iii) Design participatory exercises to facilitate group discussions, brainstorm issues, analyze information, and develop recommendations and strategies; and (iv) Record and share results of recommendations and actions to be taken.	Government, NGOs, CSOs, DPs, Private Sector organizations, Disability Associations
Focus group meetings	This will be used to present project information to stakeholders and to facilitate discussions and to obtain feedback on specific issues such as SEA/SH, disability inclusion, displaced persons resulting from natural disaster, that merit collective examination with various groups of stakeholders in order to build trust in the project.	Vulnerable groups
Surveys/ Independent evaluations	Surveys will be used to gather beneficiary opinions and views about project interventions. CSOs would also be engaged to support citizen feedback surveys and E&S audits for the project.	Project beneficiaries

Table 20: Summary of stakeholder needs and communication methods

Stakeholder Group	Characteristic of stakeholders	Language needs	Preferred Communication method	Specific needs (Accessibility larger print, daytime meeting)
Affected Parties				
Individual small and marginalized community, existing CBOs of petty traders, joint community based organization. PAPs	Direct Beneficiaries and affected communities and head of households Project affected persons who will be physically or economically displaced	English local dialect	Through phones & Engagement Meetings & consultation	Meetings held in large conference hall OHS measures, hand hygiene and PPE, extra safety measures, such as social distancing were adhere to
Other Interested Parties				
Civil society groups and NGOs that pursue environmental and socio-economic interests and may become partners of the project	Non-for-profit organizations on County, national and local levels that pursue environmental and socio-economic interests and may become partners of the project	Local Languages or dialect, English	Emails. Social media Platform, website,	Donor funding to contribute to emergency response procedures
Community Level Institution	Community authority, local leaders,	Local language	Official channels of communication	Coordination, information dissemination and engagement at county level
The Media, & Social media platforms	Users of Facebook, Instagram etc., active internet users	Official language		Reliable information sources, timely updates on distribution of good and legibility of households

Monrovia City Corporation, EPA Public Works, Ministry of Finance UNICEF	Other interested parties that might either directly or indirectly be affected by the project	General and official English	Emails, telephone calls, social media, the media, news papers	Reliable information sources, timely updates on distribution of good and legibility of households
Vulnerable and Disadvantages Person				
Women farmers and women headed households, Single Mother	Vulnerable groups	English and local tribal language	Through self-help groups, community coordinators, local & community Authority	Meetings aligned with meeting schedule of self-help groups, local leaders and other CBOs; within their habitations
Disadvantaged and Vulnerable Households, including landless and disabled households.	Vulnerable and Disabled	Local dialect, English	Through self-help groups, community, representative and local NGOs, CBOs	Special Meetings organized with advance notice organized at suitable timings and in accessible places;

6.9 Proposed Strategy for Information Disclosure and Engagement Method

Unlike traditional types of engagement – Communication and Consultation, Citizen Engagement is an interactive two-way process that encourages participation, exchange of ideas and flow of conversation. It reflects the willingness to share information and make citizens a partner in decision making. Active engagement gives the right to hold others accountable, and accountability is the process of engaging in participation. It seeks greater accountability from the service providers through increased dialogue, consultation and monitoring and assessing performance externally and mutually.

Any subsequent Environmental and Social Management Plans (ESMPs) and Environmental and Social Impact Assessments (ESIAs - if required) will be developed once specific investments are designed. The ESMPs/ESIAs will be consulted upon and publicly disclosed as required by the host country regulations and in line with WB Disclosure requirements.

Table 21 shows the Information Dissemination and Mode of Disclosure and Engagement for Consultation.

Table 21: Information Dissemination and Mode of Disclosure and Engagement for Consultation

Project Stage	Targeted Group	List of Information to be disclosed	Tools of Engagement, Modes of Disclosure	Frequency	Responsibility
Project Preparation	Government Agencies, Local Community, NGOs, CBOs, International Partners, CSOs	Project Appraisal Document (PAD), E&S documents (SEP, ESMF, ESCP, GM, LMP, GBV/SEA/SH, RFP, ESIA, ESMP, RP)	Dissemination of Information on dedicated project website, distribution of hard copies with relevant agencies and at designated project locations Publication of disclosure notice once in 2 national daily newspapers with wider coverage	Information dissemination & sharing on need basis	MPW/LURP-PMU & Partners
Implementation and supervision Phase	Project beneficiary communities, project affected parties, public at large, vulnerable groups, public and community workers, farmers, project staff and implementing agencies, other government entities/public authorities	Update on project design and implementation Awareness/sensitization of project direct beneficiaries about the Project interventions, selection criteria, awareness on agricultural policies and regulations	Community meetings with chiefs and town authority observing social distancing, Dissemination of hard copies of reports at designated public locations; Press releases in the local media; Information leaflets and brochures; audio-visual materials, focus group meetings	Community level meetings, local level meetings, workshops and explosive visit should be initiated Bi-Annually	PMU/MPW/IIU & Partners World Bank
	Project beneficiary communities, project	ESIA, ESMP, LMP, RP, updated SEP, GM procedures and SEA/SH	Public notices;	Mid and end of year consultative meetings with	Project Coordination Unit PMU/MPW/

	<p>affected persons; neighbouring communities; project and community workers, Public authorities; county & government authority (Land commissioners, EPA, Public works, etc.): civil society organizations, Religious Institutions/bodies, CSOs/NGOs and the general public</p>	<p>prevention plan, workers code of conduct, regular updates on Project implementation.</p>	<p>Electronic publications and press releases on the Project website & via social media;</p> <p>Publication of disclosure notice of E&S instruments once in at least 2 national daily newspapers with wider coverage;</p> <p>Distribution of hard copies to relevant institutions (e.g. community libraries) and publication of disclosure notices at public locations/notice boards in project communities;</p> <p>Consultation meetings, focus group meetings</p> <p>Publication of disclosure notice once in 2 national daily newspapers with wider coverage</p>	<p>relevant stakeholders (e.g. district officials, project affected persons, community stakeholders),</p> <p>Workshops for capacity building to be conducted as needed.</p>	
	<p>Local neighbouring communities, Towns Local NGOs, direct project Beneficiaries, Vulnerable people, Youth Group, Single women farmers, community workers, government entities</p>	<p>Relevant E&S Implementation of project documents specially ESMF, SEP, ESIA, RP GM, Performance of subprojects, grants, awareness on SEA/SH, Environmental and Social Risk management performance reports,</p>	<p>Public notices; publications and press releases on the Project web-site & via social media; Dissemination of hard copies at designated public locations; Press releases in the local media; Consultation meetings, separate focus group meetings with vulnerable</p>	<p>Throughout the life cycle of the project implementation</p>	<p>Project Coordination Unit PMU/MPW/LURP</p>

		updates on project implementation	groups, while making appropriate adjustments to consultation formats in order to take into account the need for social distancing Participatory & integrated Consultative meetings, workshops		
Project Completion Stage	All relevant Stakeholders	Achievement of project implementation, affected project beneficiaries awareness and participation and information sharing.	Through media, consultative meeting, community meetings, local meetings, press release	At the end of project implementation	Project Coordination Unit of Ministry of Public Works

6.10 Grievance Mechanism (GM)

As described in the Stakeholder Engagement Plan, a grievance mechanism will be made available to parties who have grievances or are not satisfied with any part of the resettlement and compensation process. These grievances could relate to the valuation of assets, amount of compensation paid, level of consultation, non-fulfilment of contracts, and timing of compensation, amongst others. Complaints and grievances also concern issues related to safety and nuisances caused by construction. Grievances will be handled through negotiation aimed at achieving consensus.

The project GM will be complemented by the World Bank's Grievance Mechanism Service (GMS), which provides an easy way for project-affected communities and individuals to bring their grievances directly to the attention of Bank Management. The GMS will ensure that complaints are directed promptly to relevant Bank Task Teams and/or Managers for review and action, as appropriate. The goal is to enhance the Bank's involvement, responsiveness and accountability.

The Project's Grievance Mechanism shall be distinct from Grievance Mechanisms to be prepared for workers by the different contractors. The Project's Grievance Mechanism shall have a distinct SEA/SH window that ensures confidentiality.

6.11 ESMF Disclosure

The disclosure of the ESMF is a requirement of the World Bank Environmental and Social Framework, as well as the national environmental assessment procedures. Hence, the report will be available to project beneficiaries' groups, local NGOs, and the public at large. The PMU will make copies of the ESMF available in selected public places as required by law for information and comments as well as in the media. The ESMF will be announced and published on an official Government website. EPA and PMU/MPW will upload the ESMF and other ESF standards documents for LURP onto its website <https://www.MPW.gov.lr> and invite the public to access and review the documents. The ESMF will also be interpreted in local dialects which are widely spoken in Montserrado County. The PMU will also provide copies of the ESMF documents to the public for any comments. The ESMF documents will be disclosed at the World Bank's external website and made available to any interested persons, for public access and for public information and comments/feedback as will be necessary.

7.0 CHAPTER SEVEN: INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENT AND CAPACITY BUILDING

The LURP will establish a Project Management Unit (PMU) at the MPW to be responsible for day-to-day project implementation, coordination between all involved administrative and technical agencies, preparing annual work plans and budgets, preparing procurement plans and managing procurement processes, contract management, monitoring compliance with environmental and social standards, and M&E. The PMU will hire qualified and EPA's certified Environmental and Social staff to ensure the implementation of all environmental and social obligations/compliance of the project. These individuals will form the core of the environmental and social management team that will be directly accountable to the Project Manager.

The project institutions will also include governmental ministries and agencies with contributing roles in the project. These will include MFDP, MCC, MIA, PCC, EPA, LLA, and NDMA.

7.1 *Environmental and Social Monitoring*

An important part of the ESMF is monitoring of the construction and operation of the project. The relevance of an environmental monitoring plan for a project is to provide room for judging the accuracy of impact assessment, implementation of mitigation measures and to allow for prompt remedial actions to be taken to correct deviations in the impacts and mitigation measures. Monitoring will also help discover new impacts that might have been overlooked during the assessment of impacts so that appropriate mitigation measures are put in place to ensure efficiency and sustainability.

The aim of monitoring would be to:

- a. Improve E&S management practices.
- b. Check the efficiency and quality of the EA processes.
- c. Establish the scientific reliability and credibility of the EA for the project; and
- d. Provide the opportunity to report the results on ESF standards and impacts and proposed mitigation measures implementation.

Monitoring is required to ensure that all the required environmental and social mitigation measures, set out in this ESMF (and also in the SEP, RP and RF) for the project are implemented satisfactorily.

The environmental and social ESF standards monitoring will be carried out by the staff of PMU. The PMU will ensure that the environmental and social officers are sufficiently qualified to undertake their assigned duties. The E&S team at the PMU will verify the application of mitigation measures as contained in the field reports submitted to the Unit. In this case, the E&S team will undertake regular visits to project sites to provide technical support and document progress in implementing E&S mitigation measures as provided in the ESMP/ESIA. Where feasible, the CEOs will support monitoring in line with mandates which is to oversee compliance of development project in the districts with environmental provisions. The reporting on environmental monitoring will be included in the overall project progress reports, which will be shared with the World Bank, EPA and other stakeholders as necessary. The PMU must ensure that environmental and social staff assigned on the project are qualified to implement the monitoring and other tasks assigned, and also certified by the EPA of Liberia.

7.2 PMU's Environmental and Social Officer (ESO)

The ESO shall monitor the overall implementation of the ESMF by LURP, most particularly the:

- Timely preparation of environmental and social screening forms for all subprojects
- Timely preparation and clearance of subproject ESMPs (list of instruments with dates)
- Management of prior reviews by the World Bank
- Monitoring of ESMPs implementation.
- Training of Project staff (list of persons, dates and places).

The ESO shall prepare:

- bi-annual reports summarizing monitoring results, to be included in the project's bi-annual reports to the World Bank
- reports that aggregate and analyze monitoring results ahead of regular World Bank implementation support missions with LURP
- an annual evaluation of all environmental and social monitoring activities, which will be submitted to the World Bank as part of overall project implementation reporting.

7.3 Environmental and Social Database

The ESO shall establish, maintain and regularly update a database of subprojects that will include for each subproject:

- type of subproject, name of subproject
- environmental and social risk level
- timeline (clearance of screening form, clearance of ToRs, clearance of environmental and social risk management instruments)
- supervision reports on environmental and social issues by the ESO and other LURP staff
- contractor reports
- noncompliance by contractors
- cross references to the Grievance Mechanism's log of complaints.

Table 22 summarizes the components of the Project to be monitored; roles and responsibilities of agencies/staff.

Table 22: Components of the Project to be Monitored; Roles and Responsibilities of Agencies/Staff

Components	Subcomponent	Activity	Implementing / partner agencies
<u>Component 1: Climate Resilience Infrastructure and Urban Upgrading</u>	<u>Subcomponent 1.1: Climate and Flood Risk Management Infrastructure</u>	Construction of new drainage infrastructure and upgrading of existing channels	MPW EPA MCC PCC
		blue solutions (open water areas for temporary stormwater storage), and green solutions (wetland or green vegetated areas to maintain soil infiltration and	MPW EPA MCC PCC

		temporarily store surface stormwater).	
	Subcomponent 1.2: Climate Resilient Community and Market Upgrading	Community infrastructure investments in neighborhoods	MPW MCC PCC EPA
		Infrastructure investments in markets	MPW MCC PCC Liberia Marketers Association
<u>Component 2: Strengthening Integrated Resilient Urban Development Capacity</u>	Subcomponent 2.1: Resilient Urban Planning and Development Control	Develop, maintain and update a climate resilient spatial development plan	MPW MCC PCC
		Urban development control strengthening program (legal work; training programs; support to development control tools)	MPW
	Subcomponent 2.2: Solid Waste Management Operations and Financing	Solid Waste Management Operational Plan for the Greater Monrovia Area	MCC PCC
		Assistance to strengthen the policy dialogue and systems related to property tax; business taxes; market taxes	MPW

It is a requirement of the EPA of Liberia that environmental audits are undertaken on an annual basis, during the implementation of all projects permitted by the EPA. An environmental audit report is also required before a permit issued by the EPA can be renewed or modified. Therefore, during the implementation of the LURP, annual environmental audits will be conducted.

The environmental audit will assess the compliance status of the project with reference to the conditions set by the World Bank and in the EPA permit. The audit will also assess preventive and corrective measures undertaken to ensure compliance with the World Bank’s ESS’s and the EPA’s permit, as well as demonstrate that the PMU is in compliance with such measures. The audit will also evaluate the responsibilities of the project staff with regard to their knowledge and compliance of relevant requirements of the World Bank’s ESS’s, EPA’s regulations, permits’ criteria, guidelines, etc. The audit will also investigate possible pollution of air, water and soil through site observation; and examine records of incidents an accident at the project sites.

It is a requirement of the EPA of Liberia that such environmental audits are performed by a third-party environmental entity licensed by the EPA. Therefore, the PMU will be required to hire the services of such qualified third-party environmental firm to conduct the audits for the project.

7.4 Contractor Monitoring

LURP, through his representative – the Resident Engineer (RE) for each subproject, will monitor and supervise the implementation of the ESHS requirements by contractors. The RE will carry out daily checks on each contractor to verify compliance with the ESHS and provide status update reports to the World Bank on a frequent basis through the PIU.

7.5 Resident engineer

The Resident engineers will;

- Assess sites and verify eligibility. This includes a long list of technical and administrative data collection and checklists
- Handing over of site to contractor, including administrative documentation and reminders of ESHS requirements
- Monitor, verify and ensure safe implementation of the works and that the contractor is abiding by the ESHS requirements
- Monitor, verify and ensure the quality of works, conformity of material, and that the contractor is abiding by the contract BOQ, design and clauses
- Monitor and report the progress of works and the findings of the above
- Perform with the contractors and end beneficiaries the required testing and commissioning exercise
- Finalize the handing over procedures with related technical and administrative requirements
- Monitor and ensure that the contractor is performing the maintenance as per contract
- Make sure that all works are done to the highest standards at the technical, ESHS, and administrative levels as per the contract

7.6 Capacity Building Needs for Collaborating Institutions

It is anticipated that, there will be a range of collaborating institutions under the project. These will include FBOs and NGOs such as PCC, LMA and the private sector players and participating CBO. Each of these categories will require responsive capacity enhancement on aspects of ESF issues based largely on their levels of involvement in LURP project activities. Capacity building will be in form of training on ESF mainstreaming, monitoring and reporting.

The MPW has implemented the URIRP, LIBRAMP and IDA financed transport projects (e.g., South Eastern Corridor Road Asset Management Project (SECRAMP - P149279) with some level of ESF standard management experience in World Bank-funded projects. However, the Ministry has no experience working under the new Environmental and Social Framework (ESF) of the World Bank. Therefore, the capacity of project staff will have to be built to improve the management of project 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, including members of the national steering committee.

The PMU's E&S Specialists will be responsible for organizing and assisting in training of 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 steering committee, 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:

- Introduction to World Bank’s Environmental and Social Framework (ESF);
- Environmental and social instruments requirements in development projects;
- Environmental and social screening and;
- Environmental and social reporting

This training can be delivered in form of half-day seminars. It will also be opened to Resident Engineers of MPW, all LURP staff and environmental and social officers of participating entities or contracting firms. The training will cover the following topics:

- World Bank Environmental and Social Standards;
- Liberia EPA Environmental Assessment Regulations;
- Preparation and review of screening reports;
- Introduction to ESMF/RPF;
- Preparation of ToRs for Subject Area Specialist (ESIA, Resettlement);
- Preparation of Environmental Briefs and the ESIA, RPs, etc.;
- Technical training to support implementation of the ESMF;
- Training on mainstreaming social and gender-related issues (OHS and HIV/AIDS);
- Climate Change;

Table 23 summarizes the ESMF training program.

Table 23: ESMF Training Program

Training required	Target participant to train	When	By Who	Institutional responsibility to organize the training	Training type	Estimated training logistics cost (USD)
Training on LURP ESMF, roles and responsibilities; Completion of screening forms; environmental assessment permits registration	Members of the Steering Committee, LURP staff, CBOs, FBOs, NGOs, Contractors, and MPW Resident Engineers	During project design and implementation stage	MPW and MPW-ESS & SSS	PMU and MPW	Workshop	4x1,500=6,000.00

Training required	Target participant to train	When	By Who	Institutional responsibility to organize the training	Training type	Estimated training logistics cost (USD)
forms with the EPA; Environmental and social impacts mitigation measures implementation and monitoring; Training in occupational health and safety /						
Grievance Mechanisms Procedures; Disclosure of the ESF Standards instruments;	LURP ESF Standards Officers, Stakeholders: & EPA Environmental Inspectors	During project design and implementation stage	MPW-ESS &SSS	PMU and MPW	Workshop (Training of Trainers)	2x1000= 2000.00
Totals						8,000.00

7.7 ESMF Budget

To ensure effective implementation of the ESMF, several key activities have been identified with cost attached, including public awareness and sensitization for community’s and other stakeholders; capacity building for staff of the PMU and other relevant stakeholders, including project affected communities’ key partners; and activities related to mitigation of environmental and social impacts including preparation of ESMPs for sub-projects as required.

A summary of the ESMF estimated budget for implementation is provided below in Table 24. The main activities to be undertaken have been itemized and costed.

Table 24: ESMF Implementation Budget

N°.	Item/Activity	Cost in USD
1.	Capacity building for Members of the Steering Committee, LURP staff, CBOs, FBOs, NGOs, Contractors and MPW Resident Engineers	8,000 <i>(From the training program above)</i>
2.	Equipment and Facilitation of Environmental and Social Unit (vehicles, desks, computers)	
3.	Preparation of ESMP/ESIA for the 4 subprojects, including annual E&S Audits to be conducted by third-party firm(s).	200,000
4.	Environmental monitoring and follow up Annual Auditing - Monitoring & Audit Reports - Site visits	100,000
Total Budget Estimate for ESMF Implementation		308,000.00

8. CHAPTER EIGHT: CONCLUSION AND RECOMMENDATIONS

The Government of Liberia (GoL), through MPW, prepared the ESMF for LURP that will provide guidance on the management of environmental and social impacts and risks of subprojects. The ESMF also provides institutional arrangements as well as environmental and social safeguards instruments to be prepared as part of the implementation of LURP activities in full compliance with Liberia and World Bank environmental and social safeguards policies.

The policy, legal and institutional frameworks for this ESMF and the biophysical and socio-economic baselines of the project were developed; public consultation and participation meetings conducted; the report provides potential environmental and social impacts and guidelines for mitigation. It also provides the LURP environmental and social management process as well as the implementation and monitoring and reporting procedures.

This ESMF has an inbuilt grievance procedure that will be used to address grievances that arise during the ESMF implementation. The estimated budget for the ESMF is **US \$308,000**.

Given the nature of the project, the potential adverse impacts are Substantial, but can be adequately minimized or mitigated through the implementation of the proposed mitigation measures and monitoring programs. The proposed subproject Environmental and Social Impact Assessment (ESIA) will be prepared and propose site-specific measures to mitigate adverse impacts.

Successful implementation of this ESMF will depend to a large extent on the involvement and participation of local communities. Specifically, it is recommended that:

- (i) Environmental and Social awareness and education for the key stakeholders and affected communities must be an integral part of the ESMF implementation; and
- (ii) Cooperatives and Local community structures should be adequately trained to implement the screening process, and where required to develop and to implement appropriate Environmental Management Plans.

This ESMF should be regularly updated to respond to changing local conditions, when necessary. It should be reviewed and approved through the national approval process and by the World Bank prior to project Appraisal. It should also incorporate lessons learned from implementing various Components of the project activities during project implementation. This framework will apply to any project activity within the LURP.

REFERENCES

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- World Bank (WB), 2017. Environmental and Social Framework
<http://documents.worldbank.org/curated/en/425421510962301689/pdf/SFG3795-RP-P149279-Box405310B-PUBLIC-Disclosed-11-17-2017.pdf>

ANNEXES

Annex 1: Stakeholder Attendance List

STAKEHOLDER: NORTHERN BUSHROD ISLAND				
No	Name	Position	Community	Contact
	Moses S. Weah	Youth President	St. Paul Bridge	0776521696
	Edwin C. Weah	Governor Adviser	Borough of New Kru Town	0777511820
	Hon. Moses Doe Weah	Governor	Borough of New Kru Town	0776260412
	Adam F. Pennoh	Governor's Secretary	Borough of New Kru Town	0777253646
	Love Tapson	Filing Clerk	Borough of New Kru Town	0776099685
STAKEHOLDER: SOUTH EASTERN PAYNESVILLE				
	Jessie F. Johnson	Chairman	GSA Block # 4	0777478148
	Alfred S. Tinnie	Chairman	GSA Block # 1	0778324988
	Edward G. Seward	Secretary	GSA Block # 1	0776382201
	Dave N. Fokonyelei	General Chairman	GSA	0777138351
STAKEHOLDER: CENTRAL MONROVIA NORTH				
	Sandra B. Worjloh Nah	Chairman	Block "B"	0777014014
	Stephen Kollie	Sgt. Elder Council	Buzzy Quarter	0770955483
	Prince F. Dowee	Head of Elder Council	Buzzy Quarter	0886517411
	Tarley Johnson	Chairman	Capitol Hill	0777575278
	James T. Gono	Chairman	Buzzy Quarter	0776563212
STAKEHOLDER: OMEGA MARKET COMMUNITY				
	Matthew Zanquoi	Head of Elder Council	Omega	0776215183
	Patrick M. Gongbegon	General Chairman	Omega	0776911914
	Amos G. Malawolo	General Co. Chairman	Omega	0770182887

Annex 2: Environmental and Social Screening Form

Please type or print clearly, completing this form in its entirety. You may provide additional information on a separate sheet of paper if necessary. This will guide in the identification and categorization of the project accordingly.

Component under LURP	
Name of Subproject	
Project Objective	
Expected Commencement Date	
Proposed Main Project Activities	
Location (District, Community)	
Name of Evaluator	

BRIEF DESCRIPTION OF THE PROPOSED PROJECT

EMPLOYEES AND LABORERS

Number of people to be employed: Employees and Laborers	During Construction	During Routine Operation
FULL-TIME		
PART-TIME		

DESCRIPTION OF PROCESS THAT COULD BE IMPLEMENTED

Briefly describe the type and nature or type of the project at the site.

List the type and quantity of raw materials to be used in the project and highlight their sources

Material	Quantity	Source

POTENTIAL ENVIRONMENTAL IMPACTS

Please indicate environmental impacts that may occur as a result of the proposed project.

A. The Biological Environment

The Natural Environment

Describe the habitats and flora and fauna in the project area and in the entire area expected to be affected by the sub-project (e.g., downstream areas, access roads):

Will the project directly or indirectly affect?

Natural forest types?

Swamps?

Wetlands (i.e., lakes, rivers, swamps, seasonally inundated areas)?

Natural critical habitats (parks, protected areas)?

Other habitats of threatened species that require protection under Liberia laws and/or international agreements?

YES _____ NO _____

Are there according to background research/observations any threatened/ endemic species in the project area that could be affected by the project?

YES _____ NO _____

Will vegetation be cleared? If yes, please state the distance/length of affected area

YES _____ NO _____

Will there be any potential risk of habitat fragmentation due to the clearing activities?

YES _____ NO _____

Will the project lead to a change in access, leading to an increase in the risk of depleting biodiversity resources?

YES _____ NO _____

Provide an additional description for “yes” answers:

Protected Areas

Does the subproject area or do subproject activities?

Occur within or adjacent to any designated protected areas?

YES _____ NO _____

Affect any protected area downstream of the project?

YES _____ NO _____

Affect any ecological corridors used by migratory or nomadic species located between any protected areas or between important natural habitats (protected or not) (e.g., mammals or birds)?

YES _____ NO _____

Provide an additional description for "yes" answers:

Invasive Species

Is the sub-project likely to result in the dispersion of or increase in the population of invasive plants or animals (e.g., along distribution lines)?

YES _____ NO _____

Provide an additional description for a "yes" answer:

B. The Physical Environment**Geology/Soils**

Will slope or soil stability be affected by the project? YES _____ NO _____

Will the subproject cause physical changes in the project area (e.g., changes to the topography)? YES _____ NO _____

Will local resources, such as rocks, wood, sand, gravel be used?

YES _____ NO _____

Could the subproject potentially cause an increase in soil salinity in or downstream the project area? YES _____ NO _____

Could the soil exposed due to the project potentially lead to an increase in lixiviation of metals, clay sediments, or organic materials? YES _____ NO _____

Landscape / Aesthetics

Is there a possibility that the sub-project will adversely affect the aesthetics of the landscape?

YES _____ NO _____

Pollution

Will the sub-project use or store dangerous substances (e.g., large quantities of hydrocarbons)? YES _____ NO _____

Will the subproject produce harmful substances? YES _____ NO _____

Will the subproject produce solid or liquid wastes? YES _____ NO _____

Will the subproject cause air pollution? YES _____ NO _____

Will the subproject generate noise? YES _____ NO _____

Will the subproject generate electromagnetic emissions? YES _____ NO _____

Will the subproject release pollutants into the environment? YES _____ NO _____

C. The Social Environment

Land Use, Resettlement, and/or Land Acquisition

Describe existing land uses on and around the sub-project area (e.g., community facilities, agriculture, tourism, private property, or hunting areas):

Are there any land use plans on or near the sub-project location, which will be negatively affected by subproject implementation? YES _____ NO _____

Are there any areas on or near the subproject location, which are densely populated which could be affected by the sub-project? YES _____ NO _____

Are there sensitive land uses near the project area (e.g., hospitals, schools)?

YES _____ NO _____

Will there be a loss of livelihoods among the population? YES _____ NO _____

Will the sub-project affect any resources that local people take from the natural environment? YES _____ NO _____

Will there be additional demands on local water supplies or other local resources?

YES _____ NO _____

Will the sub-project restrict people's access to land or natural resources?

YES ____ NO ____

Will the project require resettlement and/or compensation of any residents, including squatters?

YES ____ NO ____

Will the subproject result in construction workers or other people moving into or having access to the area (for a long-time period and in large numbers compared to permanent residents)?

YES ____ NO ____

Who is/are the present owner(s)/users of resources/infrastructures the subproject area?

Loss of Crops, Fruit Trees, and Household Infrastructure

Will the subproject result in the permanent or temporary loss of:

Crops?

Fruit trees / coconut palms?

Household infrastructure?

Any other assets/resources?

Occupational Health and Safety, Health, Welfare, Employment, and Gender

Is the sub-project likely to safeguard worker's health and safety and public safety (e.g., occupational health and safety issues)? YES ____ NO ____

How will the project minimize risk of HIV/Aids?

How will the sub-project minimize the risk of accidents? How will accidents be managed, when they do occur?

Is the project likely to provide local employment opportunities, including employment opportunities for women? YES ____ NO ____

Provide an additional description for "yes" answers:

Historical, Archaeological, or Cultural Heritage Sites

Based on available sources, consultation with local authorities, local knowledge and/or observations, could the sub-project alter?

Historical heritage site(s) or require excavation near the same? YES ____ NO ____

Archaeological heritage site(s) or require excavation near the same? YES ____ NO ____

Cultural heritage site(s) or require excavation near the same? YES ____ NO ____

Graves, or sacred locations (e.g., fetish trees or stones) or require excavations near the same?

YES ____ NO ____

N.B For all affirmative answers (YES) Provide description, possible alternatives reviewed and/or appropriate mitigating measures.

RECOMMENDATIONS

Environmental category: (tick where applicable)

	Category	Justification
	Does not require further environmental or social studies	
	Requires submission of only a Project Brief	
	Requires a full ESIA to be submitted on date	
	Requires an ESMP to be submitted on date	
	Requires a RP to be submitted on date	
	Requires an Indigenous Peoples Plan (IPP)	
	Requires a Physical Cultural Resources Plan	

CERTIFICATION

We certify that we have thoroughly examined all the potential adverse effects of this subproject.

Reviewer:

Name:

Signature:

Date:

Annex 3: Environmental and Social Requirements for Contractors

The Environmental, Social, Safety and Security (ESHS) requirements²⁸ are a standard list of requirements that contractors must implement for most subprojects. The subproject specific ESMPs prepared by the PMU will highlight the relevant requirements, but might also supplement the ESHS requirements, as needed, by defining additional requirements.

The ESHS requirements will be incorporated in the bidding documents and as technical clauses in contracts.

The ESHS requirements include 11 sections

12. General Provisions
13. ESHS Training
14. Site Management
15. Occupational Safety
16. Health
17. Road safety and Traffic Safety
18. Emergency Preparedness and Response
19. Labor force management, including the Code of Conduct
20. Stakeholder Engagement
21. Contractor Environmental and Social Reporting
22. Solar PV Systems (Code of Practice)

General Provisions

Contractor Environmental and Social Management Plan (C-ESMP)

The Contractor shall:

- Prepare and submit to the PMU for approval a Contractor Environmental and Social Management Plan (C-ESMP), including the following sections or subplans:
- ESHS training
- Site management
- Occupational Safety
- Health
- Road safety and Traffic Safety

Emergency Preparedness and Response

- Labor force management, including the Code of Conduct
- Stakeholder Engagement
- Contractor Environmental and Social Reporting
- Solar PV Systems
- Include in the C-ESMP a detailed explanation of how the contractor's performance will meet the ESHS requirements as defined in the contract bidding documents
- Include in the C-ESMP an organization chart of the personnel assigned to environmental and social management
- Ensure that sufficient funds are budgeted to meet the ESHS requirements, and that sufficient capacity is in place to oversee, monitor and report on C-ESMP performance.

²⁸ The ESHS requirements build on the General EHS Guidelines of the World Bank Group, but also take into account other World Bank guidelines, and good practice notes

- Put in place controls and procedures to manage their ESHS performance

The C-ESMP will be a contractual document that will serve as a reference during the monitoring and evaluation of the environmental and social performance of the Contractor.

National Laws and Regulations

The Contractor shall:

- Know, respect and apply the laws, regulations and standards in force in Liberia relating to the environment, as well as to social, health and safety aspects
- Assume full responsibility for any claims related to activities under their control that do not comply with these laws, regulations, or standards

Contractual obligations

The Contractor shall:

- Get prior written approval from PMU Engineers before starting any activities
- Designate a ESHS Officer who will ensure that ESHS requirements are rigorously followed by all and at all levels of execution, both by the Contractor's workers and by any persons in contact with the Contractor's activities
- Comply with ESHS requirements and its C-ESMP until final acceptance of the work by the PMU
- Remedy any defect, failure, or non-performance of the ESHS requirements or its C-ESMP that is duly notified to it by the PMU or its representative
- Assume the costs associated with any delay or interruption of works, as well as any additional work resulting from non-compliance with the ESHS requirements or its C-ESMP

In accordance with the contractual provisions, failure to comply with the ESHS requirements or the C-ESMP may be grounds for termination of the contract. The Contractor who has been terminated for failure to comply with ESHS requirements or its C-ESMP may be subject to sanctions up to and including suspension of the right to bid for a period determined by the PMU, as well as a freeze on the holdback.

Failure by the Company to comply with one or more ESHS requirements or its C-ESMP may expose it to refusal of final acceptance of the work by the PMU.

The Contractor's obligations with respect to ESHS requirements run until final acceptance of the contracted activity, which will only be given by the PMU after all the measures required by the ESHS requirements have been met.

ESHS Training

The Contractor shall

- Determine ESHS training needs in collaboration with the PMU
- Maintain records of all ESHS training, orientation, and induction.
- Ensure, through appropriate contract specifications and monitoring that service providers, as well as contracted and subcontracted labor, are trained adequately before assignments begin.
- Demonstrate that its employees are competent to carry out their activities and duties safely. For this purpose, the Contractor shall issue a Competence Certificate for every person working on site (relative to trade and aspect of work assignment) that specifies which tasks can be undertaken by which key personnel.

Orientation Training

The Contractor shall:

- Provide ESHS orientation training to all employees, including management, supervisors, and workers, as well as to subcontractors, so that they are apprised of the basic site rules of work at/on the site and of personal protection and preventing injury to fellow employees.
- Training should consist of basic hazard awareness, site-specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Any site-specific hazard or color coding in use should be thoroughly reviewed as part of orientation training.

Visitor Orientation

The Contractor shall:

- Establish an orientation program for visitors, including vendors, that could access areas where hazardous conditions or substances may be present.
- Visitors shall not enter hazard areas unescorted.
- Ensure that visitors shall always be accompanied by an authorized member of the contractor, or a representative of the PMU, who has successfully fulfilled the ESHS orientation training, and who is familiar with the project site construction hazards, layout, and restricted working areas.

New Task Employee and Contractor Training

The Contractor shall:

- Ensure that all workers and subcontractors, prior to commencement of new assignments, have received adequate training and information enabling them to understand work hazards and to protect their health from hazardous ambient factors that may be present. The training should adequately cover the step-by-step process that is needed for Project activities to be undertaken safely, with minimum harm to the environment, including:
 - Knowledge of materials, equipment, and tools
 - Known hazards in the operations and how they are controlled

Potential risks to health

Precautions to prevent exposure

- Hygiene requirements
- Wearing and use of protective equipment and clothing
- Appropriate response to operation extremes, incidents and accidents

Site Management

General Provision

The Contractor shall:

- Obtain all permits necessary to perform the work under the contract, including permits from local authorities, water departments, or the labor authorities

Signage

The Contractor shall:

Appropriately mark hazardous areas

- Install warning signs in Arabic

- Ensure that signage is in accordance with international standards and is well known to, and easily understood by workers, visitors and the general public as appropriate.
- Demarcate work sites with safety tape, fencing or barricades, as appropriate, to prevent unauthorized access to the Project sites
- Safeguard public safety by covering holes and by installing guardrails along temporary pathways

Vegetation

The Contractor shall:

- Prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the construction site
- Protect all trees and vegetation from damage by construction operations and equipment, except where clearing is required for permanent works, approved construction roads, or excavation operations
- Revegetate damaged areas on completion of the Works, and for areas that cannot be revegetated, scarifying the work area to a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion
- Use, as much as possible, local species for replanting and species that are not listed as a noxious weed
- Repair, replant, reseed or otherwise correct, as directed by the PMU or its representative, and at the Contractor's own expense, all unnecessary destruction, scarring, damage, or defacing of the landscape resulting from the Contractors operations
- Transport labor and equipment in a manner to avoid as much as possible damage to grazing land, crops, and property

Protection of Existing Installations

The Contractor shall:

- Safeguard all existing buildings, structures, works, pipes, cables, sewers, or other services or installations from harm, disturbance or deterioration during activities
- Coordinate with local authorities to identify existing infrastructure that might not be visible
- Repair any damage caused by the Contractor's activities, in coordination with concerned authorities.
- Take all reasonable precautions to prevent or reduce any disturbance or inconvenience to the owners, tenants or occupiers of properties, and more generally to the public
- Maintain safe access to public and private properties that might be affected by Project activities. If necessary, provide acceptable alternative means of passage or access to the satisfaction of the persons affected.
- Install retaining nets to hold falling debris during activities.
- Avoid working during night hours

Cultural Heritage

The Contractor shall:

- Avoid indirect damage to existing cultural heritage, such as affecting masonry through vibration
- Develop and adopt a chance find procedure that describes the steps to be taken if previously unknown cultural heritage is encountered during activities, including:
 - Determine in advance the possibility of finding physical cultural heritage during activities
 - Train workers and supervisors to spot potential archaeological finds
 - Keep a detailed record of findings and actions taken
 - Stop work in the affected area
 - Immediately notify the Department of Archaeology at the Ministry of Culture or a local university, for quick assessment and action

- Take measures to protect the site to avoid any destruction, including the definition and the materialization of a protection perimeter
- Suspend the works inside the protection perimeter until the national body responsible for historical and archaeological sites has given the authorization to continue them
- Prohibit the removal and relocation of objects and remains
- Define clear criteria for work stoppages required to address chance finds

Borrow Pits and Quarries²⁹

Materials required for site fill, backfill or the construction of permanent works that are not available from the surface will be obtained from borrow areas and quarries that the Contractor will identify, subject to approval by the PMU.

The Contractor shall adhere to the following standards when siting, developing, operating, and reinstating borrow pits and quarries:

- Obtain all necessary permits for borrow pits and quarry operations.
- Locate quarry sites as far away from settlements as possible. Quarry operations will produce noise and dust that will impact on nearby inhabitants even if controls are imposed.
- Fence and secure quarry sites. Steep quarry faces are a hazard to people and livestock.
- Locate borrow pits and quarries at least 100 m from watercourses or human habitations.
- Conduct a pre-blasting inspection/survey, in consultation with residents/property owners, prior to operating a quarry, to document the existing condition of buildings and identify any sensitive structures, building components or contents. The site conditions and the inspection information should be used to design the blasting operation to avoid any effects to property.
- Locate, to the extent possible, borrow pits on land that is not used for cultivation and is not wooded.
- Avoid areas of local historical or cultural interest and locate pits more than 25 m of grave sites.
- Hide, to the extent possible, pits from the road. Quarries and borrow pits should be designed to minimize visible scarring of the landscape.
- Develop a borrow pits and quarry management plan, including a plan to reinstate borrow pits and quarry sites as closely as possible to their original state

Waste from Activities

The Contractor shall:

- Collect and properly manage all solid wastes resulting from Project activities, including debris, to prevent the contamination of soil and groundwater
- Agree with relevant municipalities about waste disposal
- Carefully select waste disposal sites, to be approved by the PMU
- Minimize littering of roads by ensuring that vehicles are licensed and loaded in such a manner as to prevent falling off or spilling of materials, and by sheeting the sides and tops of all vehicles carrying mud, sand, other materials or debris
- Transfer waste to assigned places in the selected waste disposal sites with documented confirmation.
- Properly dispose of solid waste and debris at designated permitted sites waste disposal sites allocated by the local authorities, and obtain a receipt of waste from the authorized landfill authority.

Air Quality

²⁹ Contractors should consider doing borrow pits on a willing-buyer willing-seller (renter) basis to avoid involuntary land acquisition.

The most common pollutant involved in fugitive emissions is dust or particulate matter (PM) that is released during the transport and open storage of solid materials, and from exposed soil surfaces, including unpaved roads. Accordingly, the Contractor shall:

- Use dust control methods, such as covers, water suppression, or increased moisture content for open materials storage piles, or controls, including air extraction and treatment through a baghouse or cyclone for material handling sources, such as conveyors and bins;
- Use water suppression for control of loose materials on paved or unpaved road surfaces. Oil and oil by-products are not a recommended method to control road dust.
- Use wheel washes at quarries, ready-mix plants, construction sites, and other facilities to prevent track-out of mud, dust and dirt on to public road.
- Regularly clean road surfaces within the construction sites to remove accumulated fine material, and regularly clean transportation vehicles.
- Cover open bodied trucks handling sand, gravel or earth.
- Minimize smoke from diesel engines by regular and proper maintenance, in particular by ensuring that the engine, injection system and air cleaners are in good condition.

Hazardous and Toxic Materials

Toxic and deleterious wastes resulting from the Contractor's activities require special attention in order to forestall their introduction into the natural environment which could result in harm to people, aquatic life or natural growth of the area. Accordingly, the Contractor shall:

- Train workers regarding the handling of hazardous materials
- Label using easily understandable symbols, and provide material safety data sheets, for chemical substances and mixtures according to the Globally Harmonized System (GHS) of classification and labelling of chemicals
- Store hazardous materials as per the statutory provisions of the Manufactures, Storage and Import of Hazardous Chemicals Rules (1989), under the Environment (Protection) Act, 1986
- Treat hazardous waste separately from other waste
- Avoid the storage or handling of toxic liquid adjacent to or draining into drainage facilities
- Keep absorbent materials or compounds on Site in sufficient quantities corresponding to the extent of possible spills
- Select landfill sites used for the disposal of solid waste in coordination with the relevant authorities

Location of Worker Camps

The Contractor shall:

- Consult and negotiate with local stakeholders before proposing a location for its camps.
- Submit the proposed locations to the PMU for approval, including a justification for their location, as well proposed measures to mitigate the environmental and social risks and impacts around the camp and to enhance social benefits.

Decommissioning of Camps, Worksites and Plants

The Contractor shall:

- Clear sites of any equipment or waste, and ensure that the sites are free from contamination.
- Dispose of or ensure the recycling of any equipment or waste in an appropriate and environmentally sound manner.
- Restore any installation damaged by its activities to a condition equivalent to that which they were in before the start of the work.
- Ensure that sites are free of contamination.

- Clear construction sites of any equipment or waste, and ensuring that the sites are free Occupational Safety

Occupational Safety

Contractors will collaborate with other contractors in applying health and safety requirements, when workers from more than one contractor are working together in one location, without prejudice to the responsibility of each party for the health and safety of its own workers.

Severe Weather and Facility Shutdown

The Contractor shall:

- Design and build work place structures to withstand the expected elements for the region and designate an area designated for safe refuge, if appropriate.
- Develop Standard Operating Procedures (SOPs) for project or process shut-down, including an evacuation plan.

Lavatories

The Contractor shall:

- Provide adequate lavatory facilities (toilets and washing areas) for the number of people expected to work at the sites, and make allowances for segregated facilities, or for indicating whether the toilet facility is “In Use” or “Vacant”.
- Provide toilet facilities with adequate supplies of hot and cold running water, soap, and hand drying devices.
- Provide separate toilets for women workers at the worksite

Potable Water Supply

The Contractor shall:

- Provide adequate supplies of potable drinking water
- Ensure that water supplied to areas of food preparation or for the purpose of personal hygiene (washing or bathing) meets drinking water quality standards

Clean Eating Area

The Contractor shall:

- Where there is potential for exposure to substances poisonous by ingestion, make suitable arrangements to provide clean eating areas where workers are not exposed to the hazardous or noxious substances

Personal Protective Equipment (PPE)

The Contractor shall:

- Identify and provide at no cost appropriate PPE to workers, the workers of subcontractors, as well as to visitors, which gives adequate protection without incurring unnecessary inconvenience to the individual, including helmets, safety boots, gloves, goggles, safety jackets, and N95 masks, as well as body coverall, gloves, respirators with filters, and goggles in the case of contaminated sites
- Ensure that the use of PPE is compulsory
- Provide sufficient training in the use, storage and maintenance of PPE to its workers and workers of its subcontractors
- Properly maintain PPE, including cleaning when dirty and replacement when damaged or worn out;

- Determine requirements for standard and/or task-specific PPE based on of Job specific Safety Analysis (JSA)
- Consider the use of PPE as a last resort when it comes to hazard control and prevention, and always refer to the hierarchy of hazard controls when planning a safety process

Noise

The Contractor shall institute appropriate measures to reduce the exposure of workers to noise, including but not limited to:

- Ensure the working level exposure to noise falls within the IFC's Health and Safety Guidelines and or WHO guidelines on noise.
- Avoid exposure to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB(C).
- Enforce the use of hearing protection should be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound levels reach 140 dB(C), or the average maximum sound level reaches 110 dB(A).
- Provide hearing protective devices capable of reducing sound levels at the ear to at most 85 dB(A).
- Reduce the "allowed" exposure period or duration by 50 percent for every 3 dB(A) increase in in excess of 85 dB(A).
- Perform periodic medical hearing checks on workers exposed to high noise levels.
- Rotate staff to limit individual exposure to high levels.
- Install practical acoustical attenuation on equipment, such as mufflers.
- Use silenced air compressors and power generators
- Post signs in all area where the sound pressure level exceeds 85 dB(A).
- Shut down equipment when not directly in use
- Provide advance notice to occupants if an activity involving high level impact noise is in close proximity to buildings.

Slips and Falls

Slips and falls on the same elevation associated with poor housekeeping, such as excessive waste debris, loose materials, liquid spills, and uncontrolled use of electrical cords and ropes on the ground, are also among the most frequent cause of lost time accidents at construction and decommissioning sites. To prevent slips and falls from, or on, the same elevation, the Contractor shall

- Implement good house-keeping practices, such as the sorting and placing loose materials or debris in established areas away from foot paths
- Clean up excessive waste debris and liquid spills regularly
- Locate electrical cords and ropes in common areas and marked corridors
- Ensure that workers use slip retardant footwear

Working at Heights

The contractor shall implement fall prevention and protection measures whenever a worker is exposed to the hazard of falling more than two meters, or through an opening in a work surface. The Contractor shall:

- Install guardrails with mid-rails and toe boards at the edge of any fall hazard area
- Train workers on the proper use of ladders and scaffolds
- Install fall prevention devices, including safety belt and lanyard travel limiting devices to prevent access to fall hazard area, or fall protection devices such as full body harnesses used in conjunction with shock absorbing lanyards or selfretracting inertial fall arrest devices attached to fixed anchor point or horizontal life-lines

- Train workers in the use, serviceability, and integrity of the necessary PPE
- Include rescue and recovery plans, and equipment to respond to workers after an arrested fall

Struck By Objects

The Contractor shall:

- Use a designated and restricted waste drop or discharge zones, and/or a chute for safe movement of wastes from upper to lower levels
- Conduct sawing, cutting, grinding, sanding, chipping or chiseling with proper guards and anchoring as applicable
- Maintain clear traffic ways to avoid driving of heavy equipment over loose scrap
- Use temporary fall protection measures in scaffolds and out edges of elevated work surfaces, such as hand rails and toe boards to prevent materials from being dislodged
- As necessary, require workers to wear appropriate PPE, such as safety glasses with side shields, face shields, hard hats, and safety shoes

Welding/Hot Work

The contractor shall:

- Provide proper eye protection such as welder goggles and/or a full-face eye shield for all personnel involved in, or assisting, welding operations. Additional methods may include the use of welding barrier screens around the specific work station (a solid piece of light metal, canvas, or plywood).

Health

First Aid and Accidents

The Contractor shall:

- Ensure that qualified first-aid by qualified personnel is always available. Appropriately equipped first-aid stations should be easily accessible throughout the place of work.
- Provide workers with rescue and first-aid duties with dedicated training so as not to inadvertently aggravate exposures and health hazards to themselves or their co-workers. Training would include the risks of becoming infected with blood-borne pathogens through contact with bodily fluids and tissue.
- Provide eye-wash stations and/or emergency showers close to all workstations where immediate flushing with water is the recommended first-aid response.
- Provide dedicated and appropriately equipped first-aid room(s) where the scale of work or the type of activity being carried out so requires.
- Equip first aid stations and rooms with gloves, gowns, and masks for protection against direct contact with blood and other body fluids.
- Make widely available written emergency procedures for dealing with cases of trauma or serious illness, including procedures for transferring patient care to an appropriate medical facility.
- Immediately report all accidental occurrences with serious accident potential such as major equipment failures, contact with high-voltage lines, exposure to hazardous materials, slides, or cave-ins to the PMU.
- Immediately investigate any serious or fatal injury or disease caused by the progress of work by the Contractor, and submit a comprehensive report to the PMU.

Communicable Diseases

Sexually-transmitted diseases (STDs), such as HIV/AIDS, are the communicable diseases of most concern because of labor mobility. Recognizing that no single measure is likely to be effective in the long term, the Contractor shall implement a combination of behavioral and environmental modifications to mitigate communicable diseases:

- Conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all workers (including all the Contractor's employees, all subcontractors of any tier, consultants' employees working on the site, and truck drivers and crew making deliveries to the site for Works and Services executed under the Contract, concerning the risks, dangers and impact, and appropriate avoidance behavior of communicable diseases.
- Provide for active screening, diagnosis, counselling and referral of workers to a dedicated national STD and HIV/AIDS program, (unless otherwise agreed) for all site staff and labor.
- Provide male or female condoms to all Site staff and workers, as appropriate.
- Provide treatment through standard case management in on-site or community health care facilities.
- Ensure ready access to medical treatment, confidentiality and appropriate care, particularly with respect to migrant workers.
- Promote collaboration with local authorities to enhance access of workers families and the community to public health services and ensure the immunization of workers against common and locally prevalent diseases.
- Provide basic education on the conditions that allow the spread of other diseases such as COVID-19 and Cholera. The training should cover sanitary hygiene education.
- Prevent illness in immediate local communities by:
 - Implementing an information strategy to reinforce person-to-person counselling addressing systemic factors that can influence individual behavior as well as promoting individual protection, and protecting others from infection, by encouraging condom use
 - Training health workers in disease treatment
 - Conducting immunization programs for workers in local communities to improve health and guard against infection
 - Providing health services
 - Contracting an HIV service provider to be available on-site

COVID-19³⁰

In the context of the COVID-19 pandemic, Contractors shall develop and implement measures to prevent or minimize an outbreak of COVID-19, and develop procedures indicating what should be done if a worker gets sick. The Contractor shall:

- Assess the characteristics of the workforce, including those with underlying health issues or who may be otherwise at risk
- Confirm that workers are fit for work, including temperature testing and refusing entry to sick workers
- Consider ways to minimize entry/exit to site or the workplace, and limit contact between workers and the community/general public
- Train workers on hygiene and other preventative measures, and implement a communication strategy for regular updates on COVID-19 related issues and the status of affected workers
- Treat workers who are or should be self-isolating and/or are displaying symptoms
- Assess risks to continuity of supplies of medicine, water, fuel, food and PPE, taking into account international, national and local supply chains
- Reduce, store and dispose of medical waste
- Adjust work practices to reduce the number of workers and increase social distancing
- Expand health facilities on-site compared to usual levels, develop relationships with local health care facilities and organize for the treatment of sick workers
- Build worker accommodations further apart, or have one worker accommodation in a more isolated area, which may be easily converted to quarantine and treatment facilities, if needed
- Establish a procedure to follow if a worker becomes sick (following WHO guidelines)

³⁰ Based on the World Bank COVID-19 LMP Template, April 16, 2020

- Implement a communication strategy with the community, community leaders and local government in relation to COVID-19 issues on the site.

Vector-Borne Diseases

Reducing the impact of vector-borne disease on the long-term health of workers is best accomplished by implementing diverse interventions aimed at eliminating the factors that lead to disease. The Contractor, in close collaboration with community health authorities, shall implement an integrated control strategy for mosquito and other arthropod-borne diseases that includes the following measures:

- Prevent larval and adult propagation through sanitary improvements and elimination of breeding habitats close to human settlements

Eliminate unusable impounded water

- Increase water velocity in natural and artificial channels
- Consider the application of residual insecticide to dormitory walls
- Implement integrated vector control programs
- Promote the use of repellents, clothing, netting, and other barriers to prevent insect bites
- Use chemoprophylaxis drugs by non-immune workers and collaborating with public health officials to help eradicate disease reservoirs
- Monitor and treat circulating and migrating populations to prevent disease reservoir spread
- Collaborate and exchange in-kind services with other control programs in the project area to maximize beneficial effects
- Educate project personnel and area residents on risks, prevention, and available treatment
- Monitor communities during high-risk seasons to detect and treat cases

Distribute appropriate education materials

- Follow safety guidelines for the storage, transport, and distribution of pesticides to minimize the potential for misuse, spills, and accidental human exposure

Road safety and Traffic Safety

The Contractor shall ensure traffic safety by all project personnel during displacement to and from the workplace, and during the operation of project equipment on private or public roads. The Contractor shall adopt best transport safety practices across all aspects of project operations with the goal of preventing traffic accidents and minimizing injuries suffered by project personnel and the public, including:

- Emphasize safety aspects among drivers
- Improve driving skills and requiring licensing of drivers
- Institute defensive driving training for all drivers prior to starting their job
- Avoid dangerous routes and times of day to reduce the risk of accidents
- Require that drivers and co-passengers wear seatbelts, and duly sanction defaulters.
- Regularly maintain vehicles and use manufacturer approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure.

Where the project may contribute to significant changes in traffic along existing roads the Contractor shall:

- Coordinate with emergency responders to ensure that appropriate first aid is provided to all affected persons in the event of accidents

Where the project may contribute to significant changes in traffic along existing roads the Contractor shall:

- Commence activities that affect public motorways and highways, only after all traffic safety measures necessitated by the activities are fully operational.

- Arrange diversions for providing alternative routes for transport and/or pedestrians
- Minimize pedestrian interaction with construction vehicles, particularly at crossing points to schools, markets, and any animal crossing points of significance, through appropriate signage, engineered footpaths or traffic slowing devices.
- Organize meaningful road accident awareness events at all roadside schools and communities within 150 meters of the road centerline, covering safe road crossing, road accident hazards from weather conditions and vehicle roadworthiness, overloading and driver alertness, dangers posed by parked and broken-down vehicles, etc.
- Collaborate with local communities and responsible authorities to improve signage, visibility and overall safety of roads, particularly along stretches located near schools or other locations where children may be present.
- Collaborate with local communities on education about traffic and pedestrian safety (e.g., school education campaigns).
- Coordinate with emergency responders to ensure that appropriate first aid is provided to all affected persons in the event of accidents.
- Use locally sourced materials, whenever possible, to minimize transport distances, and locate associated facilities such as worker camps close to project sites.
- Employ safe traffic control measures, including road signs, traffic cones, removable barriers, and flag persons to warn of dangerous conditions.

Emergency Preparedness and Response

The Contractor shall:

- Establish and maintain an emergency preparedness and response system, in collaboration with appropriate and relevant third parties including to cover: (i) the contingencies that could affect personnel and facilities of the project to be financed; (ii) the need to protect the health and safety of project workers; (iii) the need to protect the health and safety of the Affected Communities. The emergency preparedness and response system shall include:
 - Identification of the emergency scenarios

Specific emergency response procedures

- Training of emergency response teams
- Training of workers on the actions to be taken in emergency situations
- Emergency contacts and communication systems/protocols (including communication with Affected Communities when necessary)
- Procedures for interaction with government authorities (emergency, health, environmental authorities)
- Permanently stationed emergency equipment and facilities (e.g., first aid stations, firefighting equipment, spill response equipment, personal protection equipment for the emergency response teams)
- Protocols for the use of the emergency equipment and facilities
- Clear identification of evacuation routes and muster points
- Emergency drills and their periodicity based on assigned emergency levels or tiers
- Decontamination procedures and means to proceed with urgent remedial measures to contain, limit and reduce pollution within the physical boundaries of the project property and assets to the extent possible.

Labor Force Management³¹

Labour Influx

The Contractor shall:

- Establish worker camps when accommodation supply is insufficient for workers, including subcontractors and associated support staff
- Locate worker camps away from environmentally sensitive areas
- Build additional/separate roads to project and workers' camp sites
- Organize the commute from camp to project to reduce traffic
- Ensure workers' camp and associated facilities are connected to a septic tank or other wastewater systems that are appropriate and of sufficient capacity for the number of workers and local conditions
- Avoid contamination of fresh water sources
- Provide opportunities for workers to regularly return to their families
- Provide opportunities for workers to take advantage of entertainment opportunities away from rural host communities
- Ensure that children and minors are not employed directly or indirectly on the project, and keep registration and proof of age for all employees on-site.
- Pay adequate salaries for workers to reduce incentive for theft
- Pay salaries into workers' bank accounts rather than in cash
- Get an appropriate mix of locally and non-locally procured goods to allow local project benefits while reducing risk of crowding out of and price hikes for local consumers
- Create supervised leisure areas in workers' camp;
- Establish substance abuse prevention and management programs
- Hire workers through recruitment offices, and avoid hiring "at the gate" to discourage spontaneous influx of job seekers
- Identify authorized water supply source and prohibiting use from other community sources;
- Separate service providers for community and workers' camp/construction site;
- Put in place measures to reduce water and electricity consumption;
- Employ locals to the extent possible;
- Develop and adopt a Gender Action Plan to promote the transfer of construction skills to local women, to facilitate their employment at the Project site, including training and recruitment targets.

Labor Conditions

The Contractor shall:

- Implement the measures and commitments defined in the Project Labor Management Procedures.
- Provide all workers with terms and conditions that comply with Liberian labor legislation, and applicable International Labor Organization conventions on workplace conditions.
- Hire workers through recruitment offices, and avoid hiring "at the gate" to discourage spontaneous influx of job seekers
- Put in place workplace processes for project workers to report work situations that they believe are not safe or healthy, and to remove themselves from a work situation which they have reasonable justification to believe presents an imminent and serious danger to their life or health. Project workers who remove themselves from such situations will not be required to return to work until necessary remedial action to correct the situation has been taken. Project workers will not be retaliated against or otherwise subject to reprisal or negative action for such reporting or removal.
- Ensure that children and minors are not employed directly or indirectly on the project, and keep registration and proof of age for all employees on-site.

³¹ See the Project's Labor Management Procedures (LMP)

- Avoid all forms of forced or compulsory labor, i.e., all work or service which is exacted from any person under the threat of a penalty and for which the person has not offered himself or herself voluntarily.
- Develop and adopt a Gender Action Plan to promote the transfer of skills to local women, to facilitate their employment at the Project site, including training and recruitment targets.

Insurance

The Contractor shall:

- Protect the health of workers involved in onsite activities
- Compensate any employee for death or injury

Grievance Mechanism for Workers

The Contractor shall put in place a Grievance Mechanism for its workers and the workers of its subcontractors that is proportionate to its workforce. The GM for workers shall be distinct from the Project level Grievance Mechanism described in the Project Stakeholder Engagement Plan (SEP) for affected individuals and communities, and shall adhere to the following principles:

- *Provision of information.* All workers should be informed about the grievance mechanism at the time they are hired, and details about how it operates should be easily available, for example, included in worker documentation or on notice boards.
- *Transparency of the process.* Workers must know to whom they can turn in the event of a grievance and the support and sources of advice that are available to them. All line and senior managers must be familiar with their organization's grievance procedure.
- *Keeping it up to date.* The process should be regularly reviewed and kept up to date, for example, by referencing any new statutory guidelines, changes in contracts or representation.
- *Confidentiality.* The process should ensure that a complaint is dealt with confidentially. While procedures may specify that complaints should first be made to the workers' line manager, there should also be the option of raising a grievance first with an alternative manager, for example, a human resource (personnel) manager.
- *Non-retribution.* Procedures should guarantee that any worker raising a complaint will not be subject to any reprisal.
- *Reasonable timescales.* Procedures should allow for time to investigate grievances fully, but should aim for swift resolutions. The longer a grievance is allowed to continue, the harder it can be for both sides to get back to normal afterwards. Time limits should be set for each stage of the process, for example, a maximum time between a grievance being raised and the setting up of a meeting to investigate it.
- *Right of appeal.* A worker should have the right to appeal to the World Bank or national courts if he or she is not happy with the initial finding.
- *Right to be accompanied.* In any meetings or hearings, the worker should have the right to be accompanied by a colleague, friend or union representative.
- *Keeping records.* Written records should be kept at all stages. The initial complaint should be in writing, if possible, along with the response, notes of any meetings and the findings and the reasons for the findings. Any records on SEA shall be registered separately and under the strictest confidentiality.
- *Relationship with collective agreements.* Grievance procedures should be consistent with any collective agreements.
- *Relationship with regulation.* Grievance processes should be compliant with the national employment code.

Protection from Child Labor

The Contractor shall:

- Verify that workers are older than 18 when hiring

- Exclude all persons under the age of 18.
- Review and retain copies of verifiable documentation concerning the age of workers

Protection from Sexual Exploitation and Abuse

The Contractor shall:

- Provide repeated training and awareness raising to the workforce about refraining from unacceptable conduct toward local community members, specifically women
- Inform workers about national laws that make sexual harassment and gender-based violence a punishable offence which is prosecuted
- Prohibit its employees from exchanging any money, goods, services, or other things of value, for sexual favors or activities, or from engaging any sexual activities that are exploitive or degrading to any person.
- Develop a system to capture gender-based violence, sexual exploitation and workplace sexual harassment related complaints/issues.
- Adopt a policy to cooperate with law enforcement agencies in investigating complaints about gender-based violence.

Code of Conduct

The Contractor shall ensure that all employees, including those of subcontractors, are informed about and sign the following Code of Conduct:

Contractor's Performance Monitoring Indicator

The Contractor shall define and report on Key Performance Indicators (KPIs) in specific ESHS areas. The frequency of measurement and reporting of these KPIs will depend on each KPI. Prior to the start of construction, the Contractor and the PMU will agree on the KPIs pertaining to the impacts and measurable acceptance criteria and targets for each, and the Contractor will measure and compile these KPIs to confirm that their activities on-site are not resulting in impacts, for example including water quality of effluents and river water quality below discharge points, safety indicators, or indicators of the number of community grievances. All KPIs, measurable accepted criteria, and targets, with the corresponding Monitoring Plan, will be recorded and updated with performance data. For evaluating the performance of the environmental and social management and monitoring, performance indicators are identified for effective, efficient and timely implementation of measures/actions proposed in ESMP. The indicators are defined both for construction phase and operation phase. An indicative list of Key Performance Indicators is given below.

- Number of inspections carried out by the Contractor per month.
- Number of inspections carried out by the Contractor per month.
- Number of non-compliances observed by the Contractor
- Number of non-compliances resolved by the Contractor per month
- Number of days taken to resolve the non-compliances
- Availability of environmental, social and OHS specialists in the Contractor's core team
- Number of awareness meetings conducted with stakeholders and other information or capacity building initiatives.
- Timely disbursement of compensation.
- Number of grievances received.
- Number of grievances resolved.
- Number of construction-related near misses, incidents, accidents, injuries, and fatalities.

Annex 4: Sample Code of Conduct

CODE OF CONDUCT FOR CONTRACTOR'S PERSONNEL

We the Contractor [enter name of Contractor] have signed a contract with the PMU [enter description of the activities]. These activities will be carried out at [enter the Site and other locations where the activities will be carried out]. Our contract requires us to implement measures to address environmental and social risks related to the activities, including the risks of sexual exploitation and assault and gender-based violence.

This Code of Conduct is part of our measures to deal with environmental and social risks related to the activities. It applies to all our staff, including laborers and other employees at the at all the places where the activities are being carried out. It also applies to the personnel of every subcontractor and any other personnel assisting us in the execution of the activities. All such persons are referred to as "Contractor's Personnel" and are subject to this Code of Conduct.

This Code of Conduct identifies the behavior that we require from all Contractor's Personnel

Our workplace is an environment where unsafe, offensive, abusive or violent behavior will not be tolerated and where all persons should feel comfortable raising issues or concerns without fear of retaliation.

Required Conduct

Contractor's Personnel shall:

- carry out his/her duties competently and diligently;
- comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor's Personnel and any other person;
- maintain a safe working environment including by:
 - ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
 - wearing required personal protective equipment;
 - using appropriate measures relating to chemical, physical and biological substances and agents; and
 - following applicable emergency operating procedures.
- report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health;
- treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
- prohibit the use of alcohol during work activities and at project site
- prohibit the use of illegal substances, at all times
 - not engage in any form of sexual harassment including unwelcome sexual advances, requests for sexual favors, and other unwanted verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
 - not engage in Sexual Exploitation, which means any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another. In Bank financed projects, sexual exploitation occurs when access to or benefit from Bank financed Goods, Works, Consulting or Non-consulting services is used to extract sexual gain;
 - not engage in Sexual Assault, which means sexual activity with another person who does not consent. It is a violation of bodily integrity and sexual autonomy and is broader than narrower conceptions of "rape", especially because (a) it may be committed by other means than force or violence, and (b) it does not necessarily entail penetration.

- not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;
- complete relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, and Sexual Exploitation and Assault (SEA);
- report violations of this Code of Conduct; and
- Not retaliate against any person who reports violations of this Code of Conduct, whether to us or the Employer, or who makes use of the Grievance mechanism for Contractor’s Personnel or the project’s Grievance Mechanism.

Raising Concerns

If any person observes behavior that he/she believes may represent a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done in either of the following ways:

- Contacting the Individual designated by the Contractor [enter name of Contact]
- In writing at this address []
- By telephone at []
- In person at []
- Calling [] to reach the Contractor’s hotline and leave a message (if available)

The person’s identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the person who experienced the alleged incident, as appropriate.

There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

Consequences of Violating the Code of Conduct

Any violation of this Code of Conduct by Contractor’s Personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

For Contractor’s Personnel

I have received a copy of this Code of Conduct written in a language that I comprehend. I understand that if I have any questions about this Code of Conduct, I can contact [enter name of Contractor’s contact person with relevant experience in handling gender-based violence] requesting an explanation.

Name of Contractor’s Personnel: [insert name]

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Contractor:

Signature: _____

Date: (day month year): _____

A copy of the code shall be displayed in a location easily accessible to the community and project affected people. It shall be provided in languages comprehensible to the local community, Contractor's personnel (including sub-contractors and day workers), and affected persons.

Annex 5: Contractor Environmental and Social Reporting

The Contractor shall report major work-related incidents, accidents or loss of life to PMU **within 24 hours** of their occurrence.

The Contractor shall monitor, keep records and report on the following environmental and social issues:

- *Safety*: hours worked, lost time injury (LTI), lost workdays, recordable incidents and corresponding Root Cause Analysis (lost time incidents, medical treatment cases), first aid cases, high potential near misses, and remedial and preventive activities required (for example, revised job safety analysis, new or different equipment, skills training, and so forth).
- *Environmental incidents and near misses*: environmental incidents and high potential near misses and how they have been addressed, what is outstanding, and lessons learned.
- *Major activities*: those undertaken and completed, progress against project schedule, and key work fronts (work areas).
- *ESHS requirements*: noncompliance incidents with permits and national law (legal noncompliance), project commitments, or other ESHS requirements.
- *ESHS inspections and audits*: by the Contractor, PMU, or others—to include date, inspector or auditor name, sites visited and records reviewed, major findings, and actions taken.
- *Workers*: list of workers at each site, confirmation of ESHS training, indication of origin (expatriate, local, nonlocal nationals), gender, age with evidence that no child labor is involved, and skill level (unskilled, skilled, supervisory, professional, management).
- *Training on ESHS issues*: including dates, number of trainees, and topics.
- *Footprint management*: details of any work outside boundaries or major off-site impacts caused by ongoing activities—to include date, location, impacts, and actions taken.
- *External stakeholder engagement*: highlights, including formal and informal meetings, and information disclosure and dissemination—to include a breakdown of women and men consulted and themes coming from various stakeholder groups, including vulnerable groups (e.g., disabled, elderly, children, etc.).
- *Details of any security risks*: details of risks the Contractor may be exposed to while performing its work—the threats may come from third parties external to the project.
- *Worker grievances*: details including occurrence date, grievance, and date submitted; actions taken and dates; resolution (if any) and date; and follow-up yet to be taken—grievances listed should include those received since the preceding report and those that were unresolved at the time of that report.
- *External stakeholder grievances*: grievance and date submitted, action(s) taken and date(s), resolution (if any) and date, and follow-up yet to be taken—grievances listed should include those received since the preceding report and those that were unresolved at the time of that report. Grievance data should be gender-disaggregated.
- Major changes to Contractors environmental and social practices
- *Deficiency and performance management*: actions taken in response to previous notices of deficiency or observations regarding ESHS performance and/or plans for actions to be taken should continue to be reported to PMU and WB until it determines the issue is resolved satisfactorily

Annex 6: Solar PV Systems (Code of Practice)

Installation

The contractor shall:

- Ensure that solar PV systems are installed by qualified and experienced trades people, in order to avoid or minimize electrocution and other health and safety issues associated with working with hazardous materials

Life and Fire Safety

The Contractor shall install life and fire safety measures. And ensure the following:LURP

- Avoid conditions that can lead to spontaneous combustion.
- Collect biogas for use or treatment.
- Provide a fire alarm system, including temperature sensors in the waste being treated;
- Design the facility for access by firefighting equipment, including clear aisles among windrows and access to an adequate water supply.

Beneficiary and User Awareness

The Contractor shall build awareness and provide training to beneficiaries and users of facilities with the aim of improving their understanding of the environmental and health issues associated with the battery lifecycle, including end-of-life management; most particularly:

- The safe handling of batteries including installation, removal, transport, storage and disposal
- The environmental and health aspects of poor battery disposal
- Information on the environmental and health issues associated with the highly toxic content of batteries and explanation as to why they must be stored, transported and disposed of in specific ways

Safe Handling of Batteries

The Contractor shall train beneficiaries on the following measures before they handle batteries:

- Prohibit unauthorized access to battery areas
- Consult battery owners' manuals for instructions on battery handling and hazard identification
- Wear personal protective equipment (PPE) such as chemical splash goggles and a face shield
- Wear acid-resistant equipment such as gauntlet style gloves, an apron, and boots
- Do not tuck pant legs into boots because spilled acid can pool in the bottom of your boots and burn your feet
- Place protective rubber boots on battery cable connections to prevent sparking on impact if a tool does accidentally hit a terminal
- Ensure that all metal tools (spanners, socket wrench drivers, etc.) that will come in contact with the battery terminals have metal handles taped with electrical tape or are protected by other means to help prevent inadvertent short circuits
- Clean the battery terminals with a plastic brush because wire brushes can create static and sparks
- Always remove watches and jewellery before working on a battery. A short-circuit current can weld a ring or strap to metal and cause severe burns.
- Cover maintenance tools with several layers of electrical tape to avoid sparking
- Replace batteries with a new one if they show signs of damage to the terminals, case or cover

Chemical Hazards

Lead Acid: Sulfuric acid (electrolyte) in lead-acid batteries³² is highly corrosive and acid exposure can lead to skin irritation, eye damage, respiratory irritation, and tooth enamel erosion. The Contractor shall train beneficiaries to follow the following measures to minimize risk:

- Never lean over a battery while boosting, testing or charging it
- If acid splashes on your skin or eyes, immediately flood the area with cool running water for at least 15 minutes and seek medical attention immediately
- Always practice good hygiene and wash your hands after handling a battery and before eating
- Wash your hands properly if you handle the lead plates in a battery to avoid exposure to lead. Signs of lead exposure include mood swings, loss of appetite, abdominal pain, difficulty sleeping, fatigue, headaches and loss of motor coordination.
- The chemical reaction by-products from a battery include oxygen and hydrogen gas. These can be explosive at high levels. Overcharging batteries can also create flammable gases. For this reason, it is very important to store and maintain batteries in a well-ventilated work area away from all ignition sources and incompatible materials. Cigarettes, flames or sparks could cause a battery to explode.
- Disconnect the battery cables before working on a battery. Be careful with flammable fluids when working on a battery-powered system. The electrical voltage created by batteries can ignite flammable materials and cause severe burns. Workers have been injured and killed when loose or sparking battery connections ignited gasoline and solvent fumes during system maintenance.
- Before making wiring changes to the system, disconnect the battery, either through opening the circuit breaker or over-current device, or by disconnecting the cables. Adding distilled water or cleaning terminals can be done without disconnecting.

Safe Movement of Batteries

The Contractor shall inform beneficiaries of the following measures regarding the safe movement of batteries:

- Lifting and moving batteries must be undertaken with care to avoid personal and environmental harm
- Proper lifting techniques must be used to avoid back injuries
- Because battery casings can be brittle and break easily, they must be handled carefully to avoid an acid spill
- Batteries must be properly secured and upright when handled or transported in a vehicle

Management and Disposal of Used Batteries

The Contractor shall prepare and submit to LURP a Battery Management Plan that details how batteries will be collected, transported, stored, recycled or disposed of. More specifically the Battery Management Plan shall:

- Define arrangements made with after sales service centers for the maintenance and reconditioning of batteries
- Identify centers or dealers authorized by local authorities to safely collect, store, transport and reexport used and end-of life batteries from beneficiary facilities.
- Ensure that these centers or dealers implement the relevant Project ESHS requirements, including the use of PPE, the use of proper drums for storing acid, the containment of spills during battery maintenance and collection, and adequate ventilation
- Outline how the contractor will include the end-user in the reverse-supply-chain management through training.

³² The Project will endeavour to use gel lead-acid batteries, which are significantly safer than traditional lead-acid batteries, because they are sealed in a plastic encasement with a valve that removes excess pressure.

Annex 7: Environmental & Social Monitoring Report Template

- Name of subproject:
- Project Location:
- Environmental and Social Impacts Brief description of the environmental impacts which were predicted when the project was designed.
- Environmental and Social Impacts Observed During Field Visit Brief description of the environmental effects observed during the field visit against the predicted effects and level of damage, as well as the unpredicted effects and level of damage
- Project Compliance of environmental and social policy, laws and regulations Brief description of the project's compliance with environmental specifications and guidelines
- Results of Field Visit Brief description of the ongoing bio-physical and socio-economic effects against baseline values and past monitoring results
- Conclusions and Recommendations to Project Management Listing of recommendations for adjustments so that project becomes fully compliant
- Conclusions and Recommendations to the Monitoring Programme Listing of recommendations for adjustments to the monitoring programme
- Other Observations:
- Recommendations and Conclusions
- Name of Monitor:

Signature:

Date:

- Date of Review by ESMT:

Recommended Actions by ESMT

- Brief summary of discussions and decisions on the issues by ESMT
- Signed by Standards Manager:

Date

Annex 8: Chance Finds Procedures

Project-supported civil works could impact sites of social, sacred, religious, or heritage value. "Chance finds" procedures would apply when those sites are identified during the actual construction period.

- Cultural property includes monuments, structures, works of art, or sites of significant points of view, and are defined as sites and structures having archaeological, historical, architectural, or religious significance, and natural sites with cultural values. This includes cemeteries, graveyards and graves.
- The list of negative subproject attributes which would make a subproject ineligible for support includes any activity that would adversely impact cultural property.
- In the event of finding of properties of cultural value during construction, the following procedures for identification, protection from theft, and treatment of discovered artefacts should be followed and included in standard bidding documents;
- Stop the construction activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects;
- Notify the Supervising Engineer who in turn will notify the responsible authorities;
- The Ministry of Information, Cultural Affairs, and Tourism (aka Ministry of Cultural Affairs), in collaboration with responsible local authorities (where applicable), would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures;
- Decisions on how to handle the finding shall be taken by the Ministry of Cultural Affairs or other responsible authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archaeological importance), conservation, restoration and salvage;
- Implementation of the authority decision concerning the management of the finding shall be communicated in writing by the Ministry of Cultural Affairs; and
- Construction work could resume only after permission is given from Ministry of Cultural Affairs or other responsible authorities concerned with safeguarding the cultural heritage. These procedures must be referred to as standard provisions in construction contracts. During project supervision, the Supervising Engineer shall monitor the above regulations relating to the treatment of any chance find encountered. Relevant findings will be recorded in World Bank Supervision Reports and Implementation Completion Reports will assess the overall effectiveness of the project's cultural property mitigation, management, and activities, as appropriate.

Annex 9: Sample Terms of References for Environmental Impact Assessment

According to both the World Bank's ESF, as well as GoL national laws and regulations, environmental impact assessments (EIAs) are to be conducted for proposed developments that are likely to have significant impacts on the environment and this can be upon preparation of an Environmental and Social Management Framework (ESMF). The EIA should identify potential environmental and social impacts, and environmental management plans should be prepared to avoid, minimize, mitigation or otherwise compensate those impacts. The EIAs become necessary to be prepared once specific details of the project sites become clear as well as levels of anticipated impacts of the project on the environment arising from a screening process that will be conducted. This will include preparation of an Umbrella Waste Management Plan and Biodiversity Management Plan and adoption of the recommended waste and biodiversity management mitigation measures in the ESMPs of the associated ESIA.

These generic terms of reference, which are provided as a sample, should be viewed as a tool of the ESMF and a guide to the preparation of project-specific EAs for all projects. Once projects have been selected, these sample ToRs should be modified and tailored to specific project requirements and used as a requirement for the private entity contracted to develop EA documents.

Environmental Impact Assessment Approach

- ESIA studies shall follow best international practice and shall be undertaken in a logical sequence. First, the consultant shall recognize the two dimensions under the assignment i.e. environmental and social aspects. From these, the consultant shall adequately capture data, using a well-structured tool on the various parameters under the two dimensions. It is particularly important to ensure that both aspects are well balanced and any inter-linkages explored and critically analyzed. The ESIA will assess in an integrated way all relevant direct, indirect and cumulative environmental and social risks and impacts, including those specifically identified throughout applicable ESSs. The Consultant will ensure that the environmental and social assessment takes into account all issues relevant to the project, including: (a) the country's applicable policy framework, national laws and regulations, and institutional capabilities (including implementation) relating to environment and social issues; variations in country conditions and project context; and obligations of the country directly applicable to the project under relevant international treaties and agreements; (b) applicable requirements under the ESSs; and (c) the EHSs, and other relevant Good International Industry Practice (GIIP). The environmental and social assessment will apply a mitigation hierarchy, which will: (a) Anticipate and avoid risks and impacts; (b) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; (c) Once risks and impacts have been minimized or reduced, mitigate; and (d) Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.

SCOPE OF STUDY

The contents of the EA documents shall follow the requirement of the EPA of Liberia guideline on Liberia Environmental Assessment and the World Bank ESS ESSs 1 - Assessment and Management of Environmental and Social Risks and Impacts.

An example Table of Contents (ToC) is attached at the end of this Annex for reference. Modification may be needed to adapt to actual project situation.

The following aspects need special attention and should be adequately addressed during preparation of EIA and EMP. These include: Where an environmental and social impact assessment is prepared as part of the environmental and social assessment, it will include the following:

(a) Executive summary

- Concisely discusses significant findings and recommended actions.

(b) Legal and institutional framework

- Analyzes the legal and institutional framework for the project, within which the environmental and social assessment is carried out, including the issues set out in ESS1, paragraph 26.46
- Compares the Borrower's existing environmental and social framework and the ESSs and identifies the gaps between them.
- Identifies and assesses the environmental and social requirements of any co-financiers.

(c) Project description

- Concisely describes the proposed project and its geographic, environmental, social, and temporal context, including any offsite investments that may be required (e.g., dedicated pipelines, access roads, power supply, water supply, housing, and raw material and product storage facilities), as well as the project's primary suppliers.
- Through consideration of the details of the project, indicates the need for any plan to meet the requirements of ESS1 through 10.
- Includes a map of sufficient detail, showing the project site and the area that may be affected by the project's direct, indirect, and cumulative impacts.

(d) Baseline data

- Sets out in detail the baseline data that is relevant to decisions about project location, design, operation, or mitigation measures. This should include a discussion of the accuracy, reliability, and sources of the data, as well as information about dates surrounding project identification, planning, and implementation.
- Identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions.
- Based on current information, assesses the scope of the area to be studied and describes relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences.
- Takes into account current and proposed development activities within the project area but not directly connected to the project.

(e) Environmental and social risks and impacts

- Takes into account all relevant environmental and social risks and impacts of the project. This will include the environmental and social risks and impacts specifically identified in ESSs2–8, and any other environmental and social risks and impacts arising as a consequence of the specific nature and context of the project, including the risks and impacts identified in ESS1, paragraph 28.

(f) Mitigation measures

- Identifies mitigation measures and significant residual negative impacts that cannot be mitigated and, to the extent possible, assess the acceptability of those residual negative impacts.

- Identifies differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable.
- Assesses the feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of proposed mitigation measures, and their suitability under local conditions; the institutional, training, and monitoring requirements for the proposed mitigation measures.
- Specifies issues that do not require further attention, providing the basis for this determination.

(g) Analysis of alternatives

- Systematically compares feasible alternatives to the proposed project site, technology, design, and operation—including the "without project" situation—in terms of their potential environmental and social impacts;
- Assesses the alternatives' feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of alternative mitigation measures, and their suitability under local conditions; the institutional, training, and monitoring requirements for the alternative mitigation measures.
- For each of the alternatives, quantifies the environmental and social impacts to the extent possible, and attaches economic values where feasible.

(h) Design measures

- Sets out the basis for selecting the particular project design proposed and specifies the applicable ESHGs, or if the ESHGs are determined to be inapplicable, justifies recommended emission levels and approaches to pollution prevention and abatement that are consistent with GIIP.

(i) Key measures and actions for the Environmental and Social Commitment Plan (ESCP)

- Summarizes key measures and actions and the time frame required for the project to meet the requirements of the ESSs. This will be used in developing the Environmental and Social Commitment Plan (ESCP).

(j) Appendices

- List of the individuals or organizations that prepared or contributed to the environmental and social assessment.
- References—set out the written materials, both published and unpublished, that have been used.
- Record of meetings, consultations, and surveys with stakeholders, including those with affected people and other interested parties. The record specifies the means of such stakeholder engagement that were used to obtain the views of affected people and other interested parties. Tables presenting the relevant data referred to or summarized in the main text.
- List of associated reports or plans

Environmental and Social Management Plan (ESMP)

An ESMP consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a project to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels. The ESMP also includes the measures and actions needed to implement these measures. MPW will (a) identify the set of responses to potentially adverse impacts; (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements. Depending on the project, an ESMP may be prepared as a

stand-alone document or the content may be incorporated directly into the ESCP. The content of the ESMP will include the following:

(b) Mitigation

The ESMP identifies measures and actions in accordance with the mitigation hierarchy that reduce potentially adverse environmental and social impacts to acceptable levels. The plan will include compensatory measures, if applicable. Specifically, the ESMP:

- (i) Identifies and summarizes all anticipated adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement);
- (ii) Describes—with technical details—each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
- (iii) Estimates any potential environmental and social impacts of these measures; and
- (iv) Takes into account, and is consistent with, other mitigation plans required for the project (e.g., for involuntary resettlement, Indigenous Peoples, or cultural heritage).

Monitoring identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP. Specifically, the monitoring section of the ESMP provides (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

(c) Capacity development and training

- To support timely and effective implementation of environmental and social project components and mitigation measures, the ESMP draws on the environmental and social assessment of the existence, role, and capability of responsible parties on site or at the agency and ministry level.
- Specifically, the ESMP provides a specific description of institutional arrangements, identifying which party is responsible for carrying out the mitigation and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training).
- To strengthen environmental and social management capability in the agencies responsible for implementation, the ESMP recommends the establishment or expansion of the parties responsible, the training of staff, and any additional measures that may be necessary to support implementation of mitigation measures and any other recommendations of the environmental and social assessment.

(d) Implementation schedule and cost estimates

- For all three aspects (mitigation, monitoring, and capacity development), the ESMP provides (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and (b) the capital and recurrent cost estimates and sources of funds for implementing the ESMP. These figures are also integrated into the total project cost tables.

(e) Integration of ESMP with project

- The Borrower's decision to proceed with a project, and the Bank's decision to support it, are predicated in part on the expectation that the ESMP (either stand alone or as incorporated into the ESCP) will be executed effectively. Consequently, each of the measures and actions to be implemented will be clearly specified, including the individual mitigation and monitoring measures and actions and the institutional responsibilities relating to each, and the costs of so doing will be integrated into the project's overall planning, design, budget, and implementation.

Annex 10: Draft Table of Content for ESIA Report

EXECUTIVE SUMMARY

1. GENERAL INTRODUCTION

- 1.1 Background
- 1.2 Overview of the Proposed Project.

2. LEGAL FRAMEWORK FOR ESIA REPORT PREPARATION

- 2.1 EPA/GoL ESIA Legislations
- 2.2 World Bank ESF Requirements
- 2.3 List of planning and technical documents supporting ESIA preparation
- 2.4 ESIA Approaches:
 - 2.4.1 ESIA Classification
 - 2.4.2 ESIA Instrument
 - 2.4.3 Assessment scope and key areas for assessment
 - 2.4.4 ESS Standards.

3. PROJECT DESCRIPTION

- 3.1 Contents, Scale, Investment and Construction Schedule
- 3.2 Relations with Existing Infrastructure and Plan
- 3.3 Identification of key environmental and social issues

4. BASELINE ENVIRONMENT

- 4.1 Biophysical Environment
 - 4.1.1 Climate
 - 4.1.2 Geology and soils
 - 4.1.3 Surface water and groundwater
 - 4.1.4 Vegetation/land use cover
 - 4.1.5 Protected and special management areas
 - 4.1.6 Aesthetic resources
 - 4.1.7 Noise
 - 4.1.8 Air quality
- 4.2 Social Environment
 - 4.2.1 Social-economic status
 - 4.2.2 Social assessment
 - 4.2.3 Land use plan
 - 4.2.4 Physical cultural resources
- 4.3 Identification of Environmental Sensitive Sites for the Project

5. ANALYSIS OF ALTERNATIVES

- 5.1 Without-Project scenario
- 5.2 Project strategy alternatives (if applicable)
- 5.3 Alternatives for project site/alignment/design

6. ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MITIGATION MEASURES

- 6.1 Construction/implementation stage
 - 6.1.1 Air quality

- 6.1.2 Soil erosion
- 6.1.3 Surface and groundwater
- 6.1.4 Vegetation and wildlife biodiversity
- 6.1.5 Protected and special management areas
- 6.1.6 Aesthetic Resources
- 6.1.7 Noise
- 6.1.8 Physical cultural resources
- 6.1.9 Impact of land acquisition and resettlement
- 6.1.10 Social impact
- 6.2 Operation Stage
 - 6.2.1 Wildlife and natural habitats
 - 6.2.2 Groundwater
 - 6.2.3 Noise
 - 6.2.4 Air
 - 6.2.5 Solid waste
 - 6.2.6 Social and cultural impact
- 6.3 Cumulative Impacts
- 7. ENVIRONMENTAL MANAGEMENT PLAN
 - 7.1 Environmental mitigation measures
 - 7.2 Environmental management organization and responsibilities
 - 7.3 Environmental supervision and reporting procedures
 - 7.4 Environmental monitoring plan
 - 7.5 Environmental capacity training plan
 - 7.6 Incorporation of mitigation measures into contracts
- 8. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE
 - 8.1 Objectives
 - 8.2 Methodologies
 - 8.3 Consultation process and results
 - 8.3.1 Consultation at early stage of ESIA preparation
 - 8.3.2. Draft ESIA consultation
 - 8.4 Information disclosure
- 9. CONCLUSIONS AND RECOMMENDATIONS
- REFERENCES

Annex 11: Photos

Potential Project Areas	Consultation with GPS Position and partial View of the proposed project site
<p>Central Monrovia North (Soniwein CBD) (UN Drive, Soniwein, Buzzy Quarter, Capitol Hill and Redemption Road Communities)</p>	 <p><i>FGD held at Buzzy Quarter Town Hall (Central Monrovia, Soniwein CBD)</i></p>
<p>South-Eastern Paynesville (GSA Road, Community) <i>Venue: YMCA, GSA Road</i> <i>Date: February 3, 2022</i></p>	 <p><i>Disposal of waste within the Drainage Channel</i></p>
<p>Omega Tower Community <i>Venue: Grace International Christian School Omega Community</i> <i>Date: February 3, 2022</i></p>	 <p><i>Disposal of waste within the Drainage Channel</i></p>

South-Eastern Paynesville (GSA Road, Community)

Venue: YMCA, GSA Road

Date: February 3, 2022



FGD held with Community leaders in the GSA Road

(UN Drive, Soniwein, Buzzy Quarter, Capitol Hill and Redemption Road Communities)

Venue: Buzzy Quarter Town Hall

Date: February 4, 2022



**Improper waste management observed in Central Monrovia
29 N 0300856 UTM 0697063**

Annex 12: Attendance Logs

South Eastern Paynesville

**RPF PREPARATION
MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA**

MEETING ATTENDANCE LOG

VENUE: YMCA, GSA (SOUTH EASTERN PAYNESVILLE)
DATE: Feb 3, 2022
TIME: 12:19pm

No.	NAME	POSITION	CONTACT #	SIGNATURE
	Emmanuel Johnson		077081429	<i>[Signature]</i>
	Rebecca Rosetta M. Jimmy		0886530123	<i>[Signature]</i>
	Sister Judy More-Idahyea		0886739090	<i>[Signature]</i>
	Mrs. Gurday Gbangana		0886933017	<i>[Signature]</i>
	Louise P. Wessels	Chair Person	0776733170	<i>[Signature]</i>
	Jessie K. Niemen		0886758428	<i>[Signature]</i>
	Fred S. Hpaifalah		0886551264	<i>[Signature]</i>
	Marthaline Starphah		0886524257	<i>[Signature]</i>
	Lomeice Brown	Inspector/PC	0775911800	<i>[Signature]</i>
	Jacob Ross Chortai	Inspector/PC	0770891516	<i>[Signature]</i>
	Emmanuel K. Tosint	Chair on meeting	0776016669	<i>[Signature]</i>
	Aesala Woleh		0740920316	A. W.
	Sarah G.M. Wilson		0776665708	<i>[Signature]</i>
	Sarah D. Kalleh		0779886170	<i>[Signature]</i>
	Marsoline Peabody		0775867329	R.P.
	Tupce Smith		0777082770	Tupce
	Scott W. Vincent		0888343000	<i>[Signature]</i>
	MaZee Perick		7777111010	<i>[Signature]</i>
	Saybah Zabori		077699231	<i>[Signature]</i>

**RPF PREPARATION
MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA**

MEETING ATTENDANCE LOG

VENUE: YMCA, GSA (SOUTH EASTERN PAYNESVILLE)
DATE: Feb 3, 2022
TIME: 12:19

No.	NAME	POSITION	CONTACT #	SIGNATURE
1	Rebecca Rosetta M. Jimmy	Member	077081429	<i>[Signature]</i>
2	Jessie K. Niemen	Member	0886758428	<i>[Signature]</i>
3	Pauline F. Josselot	Childhood with	0770824257	<i>[Signature]</i>
4	Kurubrah B. Gbangana	Sub-committee	0770824257	<i>[Signature]</i>
5	Mrs. Jela B. Clinton	Sub-committee	0770824257	<i>[Signature]</i>
6	Evelyn V. Saorbor	Small Business	0776743681	<i>[Signature]</i>
7	Aurora S. Chortai	Member	0777082770	<i>[Signature]</i>
8	Monty-My Nyaba	Sell (COP)	07	<i>[Signature]</i>
9	Tupce Smith	Sell cold water	0777082770	<i>[Signature]</i>
10	Tuzie M. Gbangana	Cold water	0776569963	<i>[Signature]</i>
11	Kepa F. Loma	Knock Seller	0886551264	<i>[Signature]</i>
12	Sarah Kalleh	Sell (COP)	0770824257	<i>[Signature]</i>
13	Maria Joss	Sell (COP)	088649410	<i>[Signature]</i>
14	MaZee Perick	Sell (COP)	0777111010	<i>[Signature]</i>
15	Marsoline Peabody	Sell Fish	0775867329	<i>[Signature]</i>
16	Ether Kalleh	Elderly/Widow	0776433323	<i>[Signature]</i>
17	Sarah M. G. Wilson	Small Business	0776665708	<i>[Signature]</i>
18	Emmanuel K. Tosint	Small Business	0776016669	<i>[Signature]</i>
19	Jessie P. Wessels	Chairperson	0776733170	<i>[Signature]</i>
	Linda Vanney	coal	0776117689	<i>[Signature]</i>
	Chad Deshiteh	Selling Water	0886196222	<i>[Signature]</i>
	Warran Robert	pettin tray	0776141196	<i>[Signature]</i>

RPF PREPARATION
MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)

GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: YMCA, GSA Road (SOUTH EASTERN PAYNESVILLE)
DATE: Feb 3, 2022
TIME: 12:19 PM

No.	NAME	POSITION	CONTACT #	SIGNATURE
1	Mrs Ide B. Clinton	Resident Member	077054854 0886756504	[Signature]
2	T. Mulbah Kussellie	ELBC	077074532	[Signature]
3	Rev. Emmanuel G. Gray	E. LDR	077752484	[Signature]
4	MESH Morgan	Member	0778199332	[Signature]
5	Luzine K. BEL	Member	0771564219	[Signature]
6	Josephine A. Bon	member	0776522014	J.B
7	S. Theresa T. Lombard	Co-Coder	0771375069	Theresa
8	Samuel W. Julius	Co-Chairman #2	0770958777	[Signature]
9	Jessie F. Johnson	Chairman	0777778111	[Signature]
10	Precious Siah	member	077599881	26 [Signature]
11	Marie Johnson	member	0881427054	[Signature]
12	Linda Varney		0776147619	
13	KEURAH Y. BROOKS	member	0770366455	K. Brooks
14	D. Fred Keitokpah	Member	0776348676	[Signature]
15	Jones K. Gbete	- - -	0777431299	[Signature]
16	Joshua Fahna	- - -	077835270	[Signature]
17	Tulsee M. Ghemsa	Member	0776369963	[Signature]

RPF PREPARATION
 MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
 GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: YMCA, GSA Road C SOUTH EASTERN PAYNESVILLE
 DATE: FEB 3, 2022
 TIME: 12:19 pm

No.	NAME	POSITION	CONTACT #	SIGNATURE
	Sinneh Obai Patta, II	General Secretary	0990801512	
	Mai T. Richardson	Member	07783976	
	Abiodun O. F. F. F. F.	"	0886708918	
	Nathan S. Teah Sr	Block Leader	0778183092	
	Sekou B. Fomah	Advisor- MTC	0775202700	
	RITA ROBERT	"	0775202700	
	Taili Ato	"	0955595440	
	Matthew W. Tagba	Block A, Com	0775624062	
	Alice W. Tagba	Block B Com	0998100780	
	ELISABETH PILLU	Block B, Com	0881248911	
	Jestie T. Weagba	Block B Com	0777817014	
	Yassah F. mutbah	"	09776-72296	
	Ellen McGill	Chi. Loies Inc	0775769326	
	Fatu Johnson	"	0776394458	
	Sam O. K. Messer	Youth leader	0777690777	
	Philip Oye Merchand	Chair of all chairs	0777961864	
	Adam F. Pennoh	Secretary	0880844531	

RPF PREPARATION
 MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
 GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: Chairman's Residence (SOUTH EASTERN PAYNESVILLE)
 DATE: FEB 2, 2022
 TIME: 2:20 p.m
 (FOCUS GROUP DISCUSSION)

No.	NAME	POSITION	CONTACT #	SIGNATURE
	Jessie F. Johnson	Chairman	0777781218	
	Alfred A. Tinnie	B. Chairman	0778324955	
	EDWARD G. SEWARD	SECRETARY B-1	0776382201	
	DAVID N. Johnson	Gen. Chairman	0777258351	

Attendance Log: Omega

**MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA**

MEETING ATTENDANCE LOG

VENUE: Grace International Christian Institute (Omega)
DATE: Feb 3, 2022
TIME: 4:10 PM

No.	NAME	POSITION	CONTACT #	SIGNATURE
1	Elizabeth P. Crocker	House wife	0886125707	EP Crocker
2	Cecilia Prusul	Elder	0	
3	Jenneth Phillips	Elder	077700317	Jenneth Phillips
4	Annie Languni	Farmer		
5	Serge M. Dorehite	Coop member	0776866783	Serge M. Dorehite
6	Cecilia Kerkula		0779226713	Cecilia Kerkula
7	Matthew Emmanuel	elder	077721518	Matthew Emmanuel
8	Esther B. B. O. H. V.		0778751771	
9	Kpaniah Samiah	poite trade	0778075443	Kpaniah Samiah
10	ulin Ebu Cate	me son	077955114	ulin Ebu Cate
11	Cynthia Guana	Elder		
12	James Flomo	BUSINESS	077961506	James Flomo
13	J. Camo Fallah	General Sec	0777172937	J. Camo Fallah
14	Mayamoh James	Sell coal		
15	Cynthia Samo	Farmer		
16	Jamba Parris	Farmer	0886902974	Jamba Parris
17	Abakolo E. Sbalanteh	Elder	075115609	Abakolo E. Sbalanteh
18	Annie W. G. Bor			Annie W. G. Bor
19	Thomas Dunn	BUSINESS	088093696	Thomas Dunn
20	Dorothy Loko	business	077667834	Dorothy Loko

**RPF PREPARATION
MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA**

MEETING ATTENDANCE LOG

VENUE: Grace International Christian Institute (Omega)
DATE: Feb 3, 2022
TIME: 4:10 pm

No.	NAME	POSITION	CONTACT #	SIGNATURE
	Kuribat Keanah		07790000	Kuribat Keanah
	Kipline + David		077884516	Kipline + David
	Arthur Peter		077871250	Arthur Peter
	Edwin David		077051197	Edwin David
	Emmanuel Philip		077687308	Emmanuel Philip
	Hanna Corneh		088606520	Hanna Corneh
	Chris Treshield		088679822	Chris Treshield
	E. Johnson Flomo		0886270010	E. Johnson Flomo
	Jimmy Cone + Mary		0770421560	Jimmy Cone + Mary
	Maria Cole		077020277	Maria Cole
	Kellyn V. Dorken		0770745621	Kellyn V. Dorken
	Ruth Sathie		0945144915	Ruth Sathie
	Abraham & Schickh Jr.	C.M	0886365481	Abraham & Schickh Jr.
	Dorothy Yeawson	C.M	0778112045	Dorothy Yeawson
	Roseline Julius	C.M	0886886806	Roseline Julius

MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: Grace International Christian Institute (Omega)
DATE: Feb 3, 2022
TIME: 9:30

No.	NAME	POSITION	CONTACT #	SIGNATURE
	Aaron F. Mensah	member	0776302249	A. Mensah
	Jusu Lahun	Teacher	0886921202	Jusu Lahun
	Prince G. Gunnus	Driver	0770421031	Prince G. Gunnus
	Zoray mubal	metteuric	077783890	Zoray mubal
	Oretha Madhan	Prayer M. officer	0555381962	Oretha Madhan
	Teete Seckey	BUSINESS	0776872216	Teete Seckey
	Festus M. Fidawi	Residential Member	0777990222	Festus M. Fidawi
	Pictorizer PHILIPS	MEMBER	057607822	Pictorizer PHILIPS
	Othello N. Wehgee	Man Head	0777022190	Othello N. Wehgee
	J. Emmanuel D. Jackson	Youth chairman	0778522727	J. Emmanuel D. Jackson
	Rebecca Bernard	chair-lady	0776143949	Rebecca Bernard
	Amos G. Malawo	Co-chair	0770182887	Amos G. Malawo
	Debestor Kpozinyan	Financial Sec.	0777203635	Debestor Kpozinyan
	Mrs Leona T. Gorge		0770136389	Mrs Leona T. Gorge
	Patrick M. Gongbegon	Com. Chairman	0776911914	Patrick M. Gongbegon

MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: Chairman's Residence (Omega FGD)
DATE: Feb 2, 2022
TIME: 11:27

No.	NAME	POSITION	CONTACT #	SIGNATURE
1	Matthew Zangui	Elder	0776215183	Matthew Zangui
2	ROOSEVELT Z. GON	Residence	0770261582	ROOSEVELT Z. GON
3	H.C. Takonon II O. Akredor	Residence	0775965049	H.C. Takonon II O. Akredor
4	Elder Patrick M. Gongbegon	Chairman	0776911914	Patrick M. Gongbegon
5	Amos G. Malawo	Co-chair	0770182887	Amos G. Malawo
6	Matthew S. Saekesi	Residence	77799761	Matthew S. Saekesi

MIDP RPF

Date: February 4, 2022

Omega Tower Community Women FGD

<u>Name</u>	<u>Position</u>	<u>Contact</u>	<u>Signature</u>
Jennich Philip	Elder	077710047	[Signature]
Elizabeth Gokai	Elder	02264-25769	[Signature]
Seelay Prate	Elder		
Princess Mehn		0776262402	
Orethe	Guard		
Rata	Klee		
Esther	BUNOH	0778357711	
Daniella			
Annie BOB	Lakpa	0775617639	
ORETHA Moulton			
Rebecca Boindek		07763949	
Fefee Sekie			
Annie Zenguan			

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Attendance: Central Monrovia

RPF PREPARATION
MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: Buzzy Quarter Town Hall (Central Monrovia Siniweh) CBD
DATE: Feb 4, 2022
TIME: 5:49 PM

No.	NAME	POSITION	CONTACT #	SIGNATURE
1	Naomi Sawyer	Business	077721224	N.S
2	Princess P. Danyen	Chair lady	0979125538	M.P.D
3	Saybah Tallah	Business	0775391991	St. Jallah
4	Rebecca Walls	Business woman	--	R.W
5	Annis Philips	Business woman	0779204759	A.P
6	EVA Johnson	Business	0770935430	E.S
7	Jestina Boway	Business	0779882871	J.B
8	Rehyn P. Dahn	Business	0776921132	
9	Martina James	Business	0777091306	M.
10	Bendy Mars	Business	0777218519	1
11	Albee B. Stimmer	Business	077040220	
12	Comfort Ballah	Business	077856885	C.B
13	Princess G. Mulboro	Mother	077813680	P.G.M
	Sabah David	Business	0770251346	D.
	Hawa Jansay	Business	077760738	H.

RPF PREPARATION
MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: Buzzy Quarter Town Hall (Central Monrovia Siniweh) CBD
DATE: Feb 4, 2022
TIME: 1:03 PM

No.	NAME	POSITION	CONTACT #	SIGNATURE
	George M. Staniam	Command member	07706060	G.M
	Anthony Richards	Council M.C	0110127318	A.R
	Bonu Cokle	Business	0776571010	B.C
	Jacob S. Kamsir	Business	0770846810	J.S
	Leslie Briggs	Business woman	0777511618	L.B
	Sarah M. Sidiq	Chair lady	07701117008	S.M
	Princess P. Danyen	Chair lady	0779125538	P.P.D
	Yassin Karval	Business	0776183354	Y.K
	Kieba S. Sunu	Business woman	0776913181	K.S
	Saybah Tallah	Business	0775391991	S.T
	Umu Sissay	Teacher	077721224	U.S
	NAOMI SAWYER	Business	077721224	N.S
	CHARLES MARRIOTT	Business	0776269446	C.M
	Eva Johnson	Business	0770935430	E.J
	Jestina Boway	Business	0779882871	J.B
	Ethar DINGWAY	Business	0777633270	E.D
	Johnson S. Jones	Stakeholder	0776117360	J.S
	Jamka Jankpa	Participant	077704040	J.J

RPF PREPARATION
 MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
 GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: Buzzy Quarter Town Hall C Central Monrovia Siniweh (CBO)
 DATE: Feb 4, 2022
 TIME: 5:44 pm
 (Women FGD)

No.	NAME	POSITION	CONTACT #	SIGNATURE
	Mary G. Cooper	Mother	0777-331204	
	Garmai P. Sumo	Chairlady	0775497609	<i>[Signature]</i>
	Asatu Zebadee	Business	0770650713	<i>[Signature]</i>
	UMU Sesay	Teacher	0777927703	<i>[Signature]</i>
	Yassah Korvah	Business	0776183358	<i>[Signature]</i>
	Kebbeh S. Sumo	House owner	0776913821	<i>[Signature]</i>
7	Martha G. Teah	Business	0896344444	<i>[Signature]</i>
8	Edith Dillon			
9	Korpo Kpehe	Business	0777376445	
10	Kia Koon	Business	0777376445	<i>[Signature]</i>

MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
 GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: Buzzy Quarter Town Hall C Central Monrovia, Siniweh (CBO)
 DATE: Feb 4, 2022
 TIME: 5:44 pm

No.	NAME	POSITION	CONTACT #	SIGNATURE
	Rach Prince I. Power	Chief Clerk	0776171111	<i>[Signature]</i>
	Jallah Power	Member	0774109878	<i>[Signature]</i>
	Stephen Kollie	Sen. Secy. Elder	0720988498	<i>[Signature]</i>
	Sarah Bunder	Johnson Street	0775648721	<i>[Signature]</i>
	Zulu Sappoo	Elder Chairman	0772361127	
	Emmanuel GARYAH	Member	0777957763	<i>[Signature]</i>
	Prince Quikaph	Secretary	0778443651	<i>[Signature]</i>
	Serena Kennedy		0770942577	<i>[Signature]</i>
	Nama Sawalor	Business	0776364444	N.S.
	Adama Barrie	Business	0770630887	
	Phileas Johnson	Member	0777767288	<i>[Signature]</i>
	Torley Johnson	Chairman	0777755778	<i>[Signature]</i>
	Christopher J. Daboo	Co-Chairman	077064402	<i>[Signature]</i>
	Dorcas Vas-siah	Secretary	077548671	<i>[Signature]</i>
	James J. Goro	Chairman		
	Mary G. Cooper	Co-Chairlady	0777331204	<i>[Signature]</i>
	Asatu Zebadee		0777331204	
	Princess G. Mulbah	Mother	0776136580	<i>[Signature]</i>

RPF PREPARATION
MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: Chairman Resident
DATE: 02/02/2022
TIME: 4:45 pm

FGD.
(Capitol Hill, Sonniewein and
Redemption Road Communities) Buzzy
Quarter

No.	NAME	POSITION	CONTACT #	SIGNATURE
1	Sandra B. Mbrish Nah	Black B. leader	0777014014	B. Mbrish Nah
2	Stephen Kollie	S.G. Elder Council	0770951483	Stephen Kollie
3	Prince F. Dowee	Elder Head	0777517411 0956517411	Prince F. Dowee
4	Marley Johnson	Chairman	0777575-278	Marley Johnson
5	James I. Gond	chonna	07765632	James I. Gond

RPF PREPARATION
MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: Buzzy Quarter Town Hall (Central Monrovia Sonniewein CBD)
DATE: Feb 4, 2022
TIME: 4:03 pm

No.	NAME	POSITION	CONTACT #	SIGNATURE
	George N. Stewison	Community member	0777066015	George N. Stewison
	Anthony Roberts	Community member	0776129316	Anthony Roberts
	Buu Sekle	business	0776574770	Buu Sekle
	Jacob S. Romswar	Business	0770346816	Jacob S. Romswar
	JOR BRIGGS	Home owner	0777964618	JOR BRIGGS
	Sudh. Yatside	Y (B) AT 10	0777777777	Sudh. Yatside
	Enamai P. Sumo	chairlady	0775497609	Enamai P. Sumo
	Georgiana P. Donyon	chair lady	0779125555	Georgiana P. Donyon
	Kassah K. Korvah	business	0776183352	Kassah K. Korvah
	Kebbeh S. Sumo	house owner	0776913184	Kebbeh S. Sumo
	Saybah Tallah	Business	0776391171	Saybah Tallah
	Umil Sesay	Teacher	0777877777	Umil Sesay
	XAOMI SAIDEE	Business	0777791224	XAOMI SAIDEE
	CHARLES MAMGO		0778269446	CHARLES MAMGO
	Eva Johnson	Business	0770935430	Eva Johnson
	Jestina Boway	Business	0779882871	Jestina Boway
	Esthar Dinawa	Business	0777033290	Esthar Dinawa
	Lloydson G. Flomo	Stakeholder	0776175260	Lloydson G. Flomo
	Jankpa Jankpa	Buzzy business	0777040413	Jankpa Jankpa

Attendance: Northern Bushrod Island

**RPF PREPARATION
MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA**

MEETING ATTENDANCE LOG

VENUE: New Kru Town, Hall (Northern Bushrod Island)
 DATE: Feb 6, 2022
 TIME: 3:13 pm

No.	NAME	POSITION	CONTACT #	SIGNATURE
	Delestey Vafotank Jr		0775443584	<i>[Signature]</i>
	Kpannah Flomo		0886604702	K.P.
	Rudolph T. Bogba, Jr	Secretary	0776553937	<i>[Signature]</i>
	Alex J. Taylor		0770520897	<i>[Signature]</i>
	Aurora S. Goozee	0775108494	0775108494	AS G
	Patience G. Leslie		077512559	P.G.L
	Morday m. Nyrah			M.N
	Azeta S. Bockpoin		0555545870	
	Johnny H. Tonnice		0888151090	
	Tamba Quino			
	Mercy Roberts	C. Member	0776141196	M.R.
	Sah Kamou	W. Commander	0777048496	S.K.
	Annie Gaye	C. Member		
	Esther wolo	C Member	0978438383	E. id.
	Demumbe O. Jerbo	C Member	0446686868	<i>[Signature]</i>
	Wellington K. Swan	C. II	0886213775	<i>[Signature]</i>
	FRANKLIN Njaka	C. II	0779003414	<i>[Signature]</i>
	Robert m. Dallah Marilyn Garpue		077112281	M.G
	Robert m. Dallah	Co-Chairman	077640156	<i>[Signature]</i>

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RPF PREPARATION
 MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
 GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: New Kru Town, Town Hall (Beer Factory Community)
 DATE: Feb 6, 2022
 TIME: 12:07 pm

No.	NAME	POSITION	CONTACT #	SIGNATURE
1.	Edward F. Ford	Pastor	0777234541	[Signature]
2.	Martha G. Teah		0886244439	
3.	Evelyn P. Dahn		0776929437	
4.	Joseph K. O'Keefe	Pastor		[Signature]
5.	Kai Moon	Sell. water	0777876442	
6.	Martina James	business	0777091366	M.J.
7.	Jerry Clinton	Security	077537259	[Signature]
8.	FORRA FAYE	PASTOR	0777087042	[Signature]
9.	Samuel Padmore	Business	0775517477	[Signature]
10.	Derek Abel	Business	0776797853	
11.	Pastor Clamson T. Ballah	pastor	0777562366	C.T.B.
12.	ISAAC M. CLINTON	BUSINESSMAN	0777454230	[Signature]
13.	KORPO GBAI	MARKET WOMAN	0776778450	
14.	Sum D. Scott	Landlord	0771089068	[Signature]
15.	Lawrence C. Taylor	Christian Lynch Street Bk. 0503	0778045635	[Signature]
16.	Robert B. Zebede	Land Lord	0777930400	[Signature]
17.	Edith Diklan			ED
18.	Alice B. Spinner		0770402206	[Signature]

New Km

RPF PREPARATION
MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: New Km Town, Town Hall (Duata North Community)
DATE: Feb 6, 2022
TIME: 12:07 pm (Western Bushrod Island)

No.	NAME	POSITION	CONTACT #	SIGNATURE
	Stella Kinn Kinn	Member	0776583529	[Signature]
	Alma N. Bleah	Revenue Clerk	0775906498	[Signature]
	Rufus Ti Wantee	Co-chairman	0779163143	[Signature]
	Patricia L. Bleah	Chairperson	0777906498	[Signature]
	Ishrael Foday Keita	Chairperson	0776312655	[Signature]
	PRINCE S. DAHN	Co-Chairman	0790401665	[Signature]
	Zaurine H. Hill	Co-Chairman	0776534998	[Signature]
	Adam S. Sarwar	Chairman	0773232711	[Signature]
	Garman Sam Koffa	Chairman	0776322488	[Signature]
	Howard Washington	Co-Chair	0710546872	[Signature]
	Emmanuel S. Kallon Sr.	Co-Chair PWD Branch	0776316764	[Signature]
	Mabel G. Samsson	Nyuan youth	888 81644	[Signature]
	Honah Johnson	Nyuan youth	0775662660	[Signature]
	Arif Nyebe	Chairman	0778870710	[Signature]
	Matthew C. De Jr	Youth chairperson	0775760386	[Signature]
	Ophelema Nimely	Mobilized	0778363810	[Signature]
	Cyrus W. Payluo	Youth Chairman	0777380984	[Signature]
	Milton F. Kaddah	Sanitation Head	0170479373	[Signature]
	Lawrence KOFFA	Chairman	0718-822422	[Signature]
	Cynthia Zausu	Nyuan youth	0770885905	[Signature]
	Joseph T. Dennis	Lesson Comm	0776764564	[Signature]
	Esther B. Koengy	Nyuan partner	0775091840	[Signature]
	Leon L. Gibotoe	25land clinic - Chairman	0776-5038	[Signature]

also from Women FGD (Northern Bushrod Island)

RPF PREPARATION
MONROVIA INTEGRATED DEVELOPMENT PROJECT (MIDP)
GREATER MONROVIA, LIBERIA

MEETING ATTENDANCE LOG

VENUE: New Kru Town, Town Hall (Northern Bushrod Island)
DATE: Feb 6, 2022
TIME: 3:13 pm

No.	NAME	POSITION	CONTACT #	SIGNATURE
	Fatu Johnson	Member	0776391448	F. J
	Ellen McGill	Ch. Lady	0775769326	E. M
	Jestie T. Weagba	Member	0777817024	J. W
	Ophelia N. Arimely		0778363816	
	Mabel G. Sampson	Nyuan youth	0888701644	M. S
	Honah Johnson	Nyuan youth	0775642560	
	Alice W. Togba		0776089480	A. W. T
	Cynthia Zamu	Nyuan Youth	0770385905	C. Zamu
	Fisher Bloh Koenig	Chair Person	0775091840	F. Bloh
	Mai T. Richardson	Member	0778397668	
	Musu Solomon	Chairperson	0775875596	M. S
	Marie J. Farley	Chair leader	0776460407	M. J. F
	Laurine H. Hill	Co-Chair per	0776587928	L. H. H
	Wanneh Gewleh	Co-Chair per	0776446334	W. G
	Patricia W. Kieah	Chairperson	0777904748	P. W. K