

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

Technical Assistance for Health Centres: Infrastructure Improvement Project in the Kailahun District, Sierra Leone

United Nations Office for Project Services (UNOPS)

Health Facilities Assessment (8No.) and Rehabilitation (3No.)

21895-001





EXECUTIVE SUMMARY

The World Bank Group, through Performance-Based Financing (PBF) scheme, has provided funds for the improvement of health care facility infrastructure in the Kailahun District. This is in support of the Health Services Delivery and Systems Support Project (HSDSSP) implemented by the Ministry of Health and Sanitation (MoHS), Sierra Leone. The interventions are aimed at strengthening and improving the Health Service Delivery System related to reproductive, maternal, and child health care. Through such interventions the MOHS aims at transforming eight (8) pre-selected facilities to “Hubs”, and targets reducing maternal/neonatal mortality and ending preventable deaths of new-borns and children under 5 years of age. An amended agreement was signed on 22 July 2020 between the MoHS and the United Nations Office for Project Services (UNOPS) to provide technical assistance for the design and construction of one new priority BEmONC facility in Jojoima, Kailahun District.

This Environmental and Social Management Plan (ESMP) is produced based on the recommendation from the Environment Protection Agency’s categorization system after the screening exercise in October 2020. The ESMP will serve as a working instrument providing mitigation measures for all identified current and future environmental and social conditions, impacts and risks that are anticipated to occur with the implementation of this project. The preparation of this management plan is guided by various stakeholder consultations and site inspection to assess the impacts and risks, and with strong consideration of the relevant legislative and regulatory instruments. It contains specific implementation measures, schedules and key identified responsible parties which include the World Bank Group, UNOPS, MoHS, contractors, the local authorities and the community.

The potential environmental and social risks arising during project cycle and their mitigation measures are summarised in the table that follows.

Potential Environmental and /social risk	Mitigation Measures	Impact on project phase (construction, operation /decommissioning)	Responsible Institution
Environmental			
Dust generation <ul style="list-style-type: none"> Inhalation of dust may lead to chest infection by workers, pedestrians and the closest objects Discoloration of moving and stationary objects like houses, and nearby vegetables/plants 	<ul style="list-style-type: none"> Workers should wear personal protective clothing such as dust masks. Wetting of the soil will be done two times a day Use of well-ventilated work spaces for sites activities to prevent inhaling toxic fumes Vehicles transporting sand and other dust generating materials will be fully covered Alternatively, contractors will ensure the mapping out of vehicular routes to reduce dust to dwelling areas 	Throughout construction phase	Contractor

<p>Noise disturbance</p> <ul style="list-style-type: none"> • Movement and operation of construction equipment and vehicles, activities such as tipping of gravel sand and workers noise especially, in the unlikely event that workers happen to work at night will cause discomfort to community people and sensitive receptacles (school, churches and Mosques.) 	<ul style="list-style-type: none"> • Contractors should maintain a noise level that does not exceed 85 decibels (dB). • Vehicles will be frequently serviced to avoid noise. • The supervising engineer will ensure that all workers wear earmuffs and other personal protective gear/equipment when working in noisy sections. • The use of heavy-duty machinery will be restricted to certain working hours and use the right equipment for the intended purpose. • Workers will ensure that machines are switched off when not in use. • Loud noise and vibration level activities will be undertaken during off-peak hours during the day (i.e. between 8.00 am and 5.0pm). • Contractors should not schedule night work for their workers. • Working hours will be within 7am to 7pm every day and Sunday will be off day. 	<p>Throughout construction</p>	<p>Contractor</p>
<p>Emission from equipment and vehicle operating</p>	<ul style="list-style-type: none"> • Workers will wear personal protective clothing such as dust masks. • Contractors will ensure proper maintenance of machines and vehicles regularly. 	<p>During construction</p>	<p>Contractor</p>
<p>Soil Erosion</p>	<ul style="list-style-type: none"> • Workers will ensure that surface runoff generated on impervious surfaces is not channelled directly to steep slopes. • Contractors will maintain the access roads and the work areas on a regular basis to prevent the formation of ruts, ridges and mounds that could hamper the natural flow. • The contract will ensure daily cleaning of the site with adequate waste disposal to prevent harmful substances leaking into the soil • Zones within the community susceptible to erosion and unstable soils at the beginning and end of the drain would be avoided. • The contractors will direct the surface run-off and drainage waters so that they do not go around sections where the soil is susceptible to erosion. If they cannot be diverted, the contractor/engineer will implement protective measures (such as berm, diversion channels etc) 	<p>During construction</p>	<p>Contractor</p>
<p>Hazardous/toxic material from cements dust</p>	<ul style="list-style-type: none"> • Workers will always put-on nose marks • They will also wear PPE always during working hours. 	<p>During construction</p>	<p>Contractor</p>
<p>Construction waste management</p>	<ul style="list-style-type: none"> • Contractor will do housekeeping i.e., frequently cleaning the site. • They will sort out the waste and will give all reusable material to community people in need. • This will maximize the rate of recycling of waste. • All wastes containers and areas will be properly mapped and labelled. Incorporating recyclable materials to reduce the volume and cost of new concrete mixes. • Contractor will provide trash can for canteen waste at the site. • All construction waste will be transported to the Licences/approved community landfill or dump sites. 	<p>During construction</p>	<p>UNOPS and Contractors</p>

	<ul style="list-style-type: none"> Collecting animal carcasses in a timely manner and disposing them through prompt burial or other environmentally safe methods. Ensure there is documented evidence of proper disposal of solid waste including construction debris. 		
Construction waste water	<ul style="list-style-type: none"> Wastewater disposal will be controlled not to over flow in any water body in the adjacent community or drainages. Contractor/workers will avoid community water sources and control sediment discharged from construction water 	Throughout construction	Contractor
Flora and Fauna	<ul style="list-style-type: none"> Contractor/workers will avoid removal of vegetation and shrubs in adjacent areas They will clear only areas assigned for works. Planting of trees and flowers will be recommended 	Throughout construction	Contractor
Land Use	<ul style="list-style-type: none"> Backfill and Compaction: at the end of the day's work, the contractor will backfill with the soils and compact along the drains and level the surroundings whilst keeping the construction area tidy and safe for community use. Contractor will negotiate with communities for space for loading and unloading of material and mixing of concrete if the land space assigned to the project is not sufficient to serve such purpose. 	Throughout construction	Contractor
Operational Waste Management (Solid, semi-solid, and liquid)	<p>The design provides for management of solid, semi solid and liquid medical and non-medical wastes that will be generated during the service period of the facility in accordance with the MoHS waste management design manual. These facilities include:</p> <ul style="list-style-type: none"> Non-medical solid waste store: to accumulate non-medical solid waste for transportation and disposal to a nearby dump site outside of the facility. Incinerator: For incineration of hazardous medical wastes. Ash pit: for disposal of incinerated materials Sharp pit: for the disposal of sharp materials like needles, surgical blades, etc. Placenta pit: for disposal of placentas. Septic tank: for the storage and partial treatment of faecal sludge from WCs. Engineered soak-away pit: for the storage and biological treatment of grey water Infiltration enhanced pavements: to allow for infiltration of large volumes of storm water. Stormwater drainage: for the channeling and disposal of excess non-contaminated stormwater into the nearby wetland. 	Throughout operational period	MoHS
Health and safety			
<ul style="list-style-type: none"> Occupational Health and Safety (Accidents and Incidents) 	<ul style="list-style-type: none"> Contractor will provide health and safety training for all workers prior to construction Appropriate use of equipment especially for those use for climbing, electricity tools etc. 	During construction	UNOPS

	<ul style="list-style-type: none"> • The contractor will provide and orientate each worker with PPE and for visitors • Contractor will ensure the use of only materials which have an appropriate permission. • The contractor will provide information on health and safety at site. • The site supervisor will ensure usage of the PPE • Contractor will provide proper lighting if working at night • The contractor will provide OHS plan • The contractor will provide a first Aid kit at the site. • And provide water for drinking at sit 		
<ul style="list-style-type: none"> • Community Conflict Influx of workers and strangers in the community will result to theft issues and all potential Gender Based Violence and Violence Against Children issues 	<ul style="list-style-type: none"> • Contractor will do community engagement • UNOPS will establish Grievance Redress Mechanisms committee in each beneficiary community • Proper management of project information, expectation and outcomes to the community people will be ensured • The contractor and workers will avoid unnecessary socialization with the community members 	During construction	UNOPS/SESS
<ul style="list-style-type: none"> • Community Health and Safety issues Leaving dug holes unattended can create new potential hazards where children or less-abled people could accidentally fall into an open drain containing very sharp objects or discharged water 	<ul style="list-style-type: none"> • The contractor will provide orientation for workers on construction health and safety. • There will be a restriction of too many visitors to construction sites. • The contractor will control the influx of women and children selling food stuff at construction sites. • Sharp objects and materials will be handled with care and dug holes will be labelled and given danger signs. • Dug holes will be covered before close of the day's work. • They must avoid GBV activities • The contractor will establish good relationship with the community 	Before and during construction	
Spread of COVID-19 Influx of construction workers and activities may be risky to contacting the COVID 19	<ul style="list-style-type: none"> • The contractor will adopt the COVID 19 prevention and control measures as indicated in this ESMP and in line with GoSL and UNOPS regulations such as social distancing, wearing nose mask, washing of hands using soap and water or an alcohol-based hand rub. 	During construction	UNOPS/Contractor
Social impact			
Gender- Based Violence issues Influx of workers and strangers in the communities will increase the risk of GBV activities. Provision of job for the male population will increase their income level and power relation	<ul style="list-style-type: none"> • Contractor and workers will receive training on construction GBV and VAC • Contractor and individuals will sign codes of conduct before construction 	Before construction commences	UNOPS
Labour and employment and issues of child labour	<ul style="list-style-type: none"> • The Contractor shall comply with all the relevant Labour Laws and Policies applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety and welfare, and shall allow them all their legal rights. 	Before and during constructions	Contractor

	<ul style="list-style-type: none"> • The Contractor will procure all unskilled labour from the Community • There shall be a binding Contract between the Contractors and all his/her employees. • Employee's Code of conduct will be prepared to be signed by all workers. • The contractor will give preference to the community if they have the requisite qualifications for employment and will pay community labourers for their services • All unskilled labours will come from the community • They will not employ anybody (child) below the age 18 according to Sierra Leonean Child Right Act 2015 		
Removing underground facilities	<ul style="list-style-type: none"> • Although the site is not expected to have underground facilities however, contractors or workers will be careful in digging/excavating the soil for any object that they may find foreign (archaeological). 	During construction	Contractor
Grievance Redress Mechanism	<ul style="list-style-type: none"> • Contractor to work closely with community stakeholders to form a GRM committee to resolve project related complains • Contractor to do community engagement before commencing works 	Throughout construction	Contractor, UNOPS, and community stakeholders

The above environment, social and health impact management activities are being incorporated in the relevant project implementation activities such as planning, design, and procurement to ensure effective implementation. A grievance redress committee consisting of project and local authorities is being established. The following table shows the various indicators to be monitored for successful implementation of the plan.

Focal Areas	Indicators	Methodology	Frequency
Procurement Process-Bid preparation:	Completion of Drive Supplier Sustainability Questionnaire, and request for environmental, health, safety and social management plan by suppliers.	Review of bid documents and evaluation report	Throughout the bid process
Land: Physical Degradation	Area of exposed surface	Physical inspection	Daily
Waste Management	Bulk of waste	Physical inspection	Daily
Air	Site emission Trapped particles	Sampling Lab test	Weekly
Noise	Noise above 55dB Number of Complaints from the community	Ambient noise monitoring	Daily
Health and Safety	No of PPE issued Utilization of PPE Accidents/Incidents Number of workers wearing PPEs	PPE register Regular inspect Accident Register GRM committee	Daily
GRM	Number of complaints/ grievances registered. Percentage of grievances resolved	Review of the following: <ul style="list-style-type: none"> • Platform 	Monthly

	<p>Percentage of grievances redressed within stipulated time period</p> <p>Time required to resolve complaints (disaggregated by different types of grievances)</p> <p>Percentage of complainants satisfied with response and grievance redress process</p> <p>Percentage of project beneficiaries that have access to the GRM</p>	<ul style="list-style-type: none"> ● GRM Logbook ● Period GRM reports 	
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ACRONYMS AND ABBREVIATION

AIDS	Acquired Immunodeficiency Syndrome
BOQ	Bill of Quantity
CBD	Central Business District
COVID	Coronavirus Disease
dB	decibel
EOC	Emergency Operation Centre
HS	Health and Safety
E&S	Environmental and Social
EIA	Environmental Impact Assessment
ESF	Environmental and Social Framework
EPA-SL	Environment Protection Agency- Sierra Leone
ESHIA	Environmental Social and Health Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental Social Management Plan
ESS	Environmental and Social Standard
FCC	Freetown City Council
FERP	Freetown Emergency Recovery Project
GBV	Gender Based Violence
GoSL	Government of Sierra Leone
GPS	Global Positioning System
GRM	Grievance Redress Mechanism
GVWC	Guma Valley Water Company
HIV	Human Immuno-deficiency Virus
ID	Identification Card
IFC	International Finance Corporation
ITCZ	Inter-Continental Convergence Zone
MOU	Memorandum of Understanding
NEP	National Environment Policy
NGO	Non-Governmental Organization
OHS	Occupational Health and Safety

ONS	Office of National Security
PDO	Project Development Objective
PFC	Property Found Committee
PPE	Personal Protective Equipment
SEA	Strategic Environmental Assessment
SES	Social and Environmental Standards
SLRA	Sierra Leone Road Authority
TB	Tuberculosis
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHABITA	United Nations Human Settlements Programme
UNOPS	United Nation – Office of Project Services
VAC	Violence against Children
WAP-NP	Western Area Peninsula National Park
WB	World Bank
WHO	World Health Organization
NHSSP	National Health Sector Strategic Plan
FHCI	Free Health Care Initiative
MoHS	Ministry of Health & Sanitation
RCH	Reproductive and Child Health
PBF	Performance Based Financing

1. INTRODUCTION

Since the start of the 2010 National Health Sector Strategic Plan (NHSSP), the Government of Sierra Leone (GoSL) has embarked on a series of improvements in the health sector. With the launching of the Free Health Care Initiative (FHCI) in 2010, GoSL took an ambitious approach to reducing financial barriers by introducing health care systems strengthening across all pillars (Governance, Communications, M&E, Drugs and Medical Supplies, Infrastructure, Health Workforce, and Financing). The FHCI was found to be one important factor contributing to improve health care, in particular to coverage and equity of coverage of essential services for mothers and children. This is seen as an enabler in meeting the Sustainable Development Goals' target set to be achieved by 2030 (it refers to SDG 3, "Ensure healthy lives and promote wellbeing for all at all ages").

The Performance Based Financing was launched in Sierra Leone in April 2011, to strengthen the Free Health Care Initiative. Between 2011 and 2016, GoSL, through the Ministry of Health & Sanitation (MoHS) implemented a nation-wide "National Performance Based Financing" scheme. Under the PBF scheme, the health sector of Sierra Leone received support from the World Bank Group through the Reproductive and Child Health (RCH) Project. The objective is to increase the utilization of a package of essential health services by pregnant and lactating women and children under the age of five. The PBF programme is therefore complementary to the Free Healthcare Initiative and offers incentives to health facilities together with compensation for their loss of income through patient fees. PBF offers a systematic approach to health reforms, which also provides incentives for health workers' performance to improve staff motivation and funds for additional investments at grass root level. The programme has already succeeded in providing more autonomy to health facilities to manage their own small projects. This contributes to a better work environment: more hygiene, better-equipped buildings and better supplies, for example.

Thus far, free health care has resulted in a considerable increase in the service delivery in reproductive and child health services in Sierra Leone. Recognizing this achievement and following the implementation of the National PBF scheme, which is part of the Reproductive and Child Health project, the MoHS along with the WBG is currently undertaking the re-design of the PBF for Health Facilities, targeting maternal and child health interventions at the level of health Facilities and Communities. This scheme includes the improvement of the existing infrastructure of health facilities and is intended to be implemented in three districts (namely Kailahun, Koinadugu and Falaba).

A recent study conducted by WBG modelled the optimization of health facilities in the Kailahun, Koinadugu and Falaba districts. In the Kailahun district, the study shows that with eighty-one (81) health facilities, it is possible to reach 94.8% of the population (defined as

being within 2 hours travel time of the health facility). However, with just 14 specific health facilities, it is still possible to still reach 91.4% of the population. Hence, if resources are focused on upgrading and supporting services at a smaller number (of carefully selected) facilities, then the impact can be greater than spreading the funds too thinly. These selected facilities should be upgraded to “Hubs” (where the highest level of healthcare services are centralized), with the remaining facilities as “Spokes”, where basic health care services are delivered

1.1 Project Background

In support of the Ministry for Health and Sanitation (MoHS) SL, the World Bank, through Performance-Based Financing (PBF) scheme has provided funds for the improvement of health care facility infrastructure in the Kailahun District. The interventions are aimed at strengthening and improving the Health Service Delivery System related to reproductive, maternal, and child health care. Through such interventions the MOHS aims at transforming eight (8) pre-selected facilities to “Hubs”, and targets reducing maternal/neonatal mortality and ending preventable deaths of new-borns and children under 5 years of age. UNOPS signed an agreement with the MoHS to provide Technical Assistance for infrastructure assessment and design of eight (8) pre-selected health facilities and to upgrade three (3) pre-selected health centres.

The assessment and improvements of the facilities were planned to be undertaken in phases in two (2) Work Packages (WP) • WP1: Infrastructure Assessment of eight (8) facilities to be uplifted to Basic Emergency Obstetric and New-born Care (BEmONC) level facilities, and • WP2: Design and Construction of one (1) priority facilities at Jojoima, Kailahun District In July 2019, UNOPS completed the on-site technical assessment and investigations of the existing infrastructures of the eight (8) pre-selected health facilities and on 25 July 2019, an Infrastructure Assessment Report was submitted to the MoHS. Subsequent to the submission of the report, on 13 August 2019 a meeting was held with Senior Level Management of MoHS, whereby the report was reviewed and validated by MoHS and UNOPS was directed to proceed with design activity.

Following the validation of the assessment report, in consultation with the MoHS, UNOPS developed a design brief outlining the functional units and range of services for BEmONC and CEmONC facilities, with a focus on developing the design to cater mainly maternity-related functions as stated in the original agreement. Using the design programme, a conceptual design was produced, and a copy was circulated to key directorates at the MoHS and to the District Medical Officer for review and feedback. This final concept which was developed with support from the WB assigned Architect, Nigel Wakenham, was validated at a meeting with MoHS, WB and IHPAU on 12 February 2020 with a request to incorporate the change in scope, the agreement was amended and signed on 22 July 2020. Based on new comments from the team on relocating the water tower to the high point of the site, the new layout thus warranted an extension of the site by 10 m. The required extension was confirmed by a signed agreement from the community on 22 July 2020 to offer the land. The implementation schedule was then updated on 18 August 2020 and covers the description of Services in the Agreement

Amendment which limits the intervention to design and construction of one priority BEmONC facility in Jojoima, Kailahun District. The project title is however maintained as Health facilities assessment (8No.) and rehabilitation (3 No.).

1.2 Objective and Rationale of the ESMP

The Environmental and Social Management Plan is based on the recommendation made from the Environment Protection Agency's categorization system. The decision was made from the findings obtained from the screening exercise prepared for the construction of healthcare facilities and infrastructure in Jojoima, Kailahun district. This document will serve as a working instrument that will provide mitigation measures for all identified environmental and social conditions, impacts and risks that are anticipated to occur with the implementation of this project, and to prevent the future conditions that will happen without the intervention. The preparation of this management plan is guided by various stakeholder consultations and site inspection to assess the impacts and risks. It contains specific implementation measures, schedules and identified responsible parties.

1.3 Legislative and Regulatory Framework

This section will cover relevant policies that govern the implementation of construction of health facilities and related works which must be implemented in compliance with nation laws, policies and standards as well as the international policies of the world Bank and the United Nation.

1.3.1 The UN Social and Environmental standards

This plan is prepared according to United Nation Social and Environmental Safeguards standards and Procedures, relevant regulation and laws of Sierra Leone, and in line with International Best Practice. Environmental and social safeguard policy/standards for UNHABITA have provided guidance on how to identify risks and impacts, and are designed to help avoid, mitigate, and manage risks and impacts throughout the life of a project. These safeguard standards are going to guide management on the environmental and social risks and impacts so that the full sustainable development benefits from this project would be realized.

1.3.2 The Constitution of Sierra Leone, 1991

The 1991 Constitution of Sierra Leone, under section 7.1 stated amongst others important issues the pursuit of social protection, and prosperity for its people. Additionally, dealing with the social objective in section 8(3), it established that the state shall direct its policy towards ensuring that, every citizen without discrimination on any grounds, whatsoever, shall have the opportunity for serving adequate means of livelihood as well as adequate opportunities to secure suitable employment. Also, irrespective of the nature of job, the health, safety and welfare of all persons in employment is safeguarded and not endangered or abused, and in particular, having regard for the resources of the state. This further laid emphasis on equal

pay for equal job without discrimination on account of sex, and that adequate and satisfactory remuneration is paid to all persons in the employment.

Relevance: The significance of this legal framework to the project is related to the protection of construction workers' health and safety, and protection of the environment and its sustainable use; it is applicable for the protection of raw water resource for the benefit of the community and law emphasizes the need for gender equality and equity in terms of access to employment opportunities, equal pay and safety during the execution of works. The implementation of this project would be guided by the national constitution of 1991.

1.3.3 The Sierra Leone National Environmental (NEP) Policy, 1994

This policy was established and approved by cabinet in 1990 and revised in 1994 (GoSL,1994) is aimed at achieving sustainable development in Sierra Leone, through sound environmental and natural resources exploitation and management. The NEP broad sectoral objectives and goals on the country's natural resources are all set to ensure implementation of the planned construction of the health facility and its related works.

Relevance: Noteworthy and most importantly, the proposed construction work and erecting the perimeter fence in the beneficiary community need to comply with the NEP Policy objective of ensuring sustainable use of the country's natural resources including but not limited to vegetation, land and other biological resources.

1.3.4 The Forestry Policy 2010

It's a regulatory framework/policy and plan that support relevant provisions of the Constitution which permits restrictions on activities within forests (natural resources). Emphasises that no protected forest shall be tampered with in any way as is stated in section 21, subsection (2) of the Forestry Act - 1988, without written permission from the Chief Conservator of the forest at line ministry.

Relevance: Notwithstanding, the proposed construction of maternal health facility in this community is a development to the people of Jojoima and the health sector of Sierra Leone, no reserved forest would be tampered with as the proposed site allocated for the construction of the facility is reserved land of the existing health centre within the township.

1.3.5 The National Land Policy 2005

The 1991 constitution buttressed the National Land Policy 2005, which makes provision for institution/organization/persons to acquire land necessarily in the public interest but this must be done in consultation and engagement of property owners and the compensation of project affected persons (where necessary) at present market replacement value as provided in the principles of the land policy of 2005." In another word, it aims at protecting the use of land and all its natural resources in support of various socio-economic activities undertaken in accordance with sustainable resource management principles and in maintaining viable ecosystems.

Relevance: During the construction exercise, any land areas that would be acquired (depending on the designed) for excavation and removal of soil for the construction of perimeter fence, bore hole (water source) and the main health care facility (building), the management of the contractor together with UNOPS staff need to implement the necessary recommendations outline in the policy.

1.3.6 The National Land Policy of Sierra Leone 2015

The National Land Policy of Sierra Leone 2015 is to serve as a legal instrument for the effective and efficient land management and administration systems in Sierra Leone. This policy aims at moving towards a clearer, more effective and unbiased land tenure system that shall provide for social and public demands, stimulate responsible investment and form a basis for the nation's continued development.

Relevance: One of the pillars for nation development rests on a secure land tenure system which is a critical element of consolidating the peace and recovery processes in Sierra Leone and thus, fundamental to the country's development.

1.3.7 Environment Protection Act, 2008 as amended in 2010

The establishment of the Environment Protection Agency (EPA-SL) emanated from the Environment Protection Act of 2008 as amended in 2010 is charged with the overall mandate of effectively protecting the environment and other related matters. The EPA-SL Act 2008 gives overall responsibility for the effective protection of the Sierra Leone environment, which is land, air, water and all flora, fauna and human beings living therein and their interrelationship. However, several Ministries, Departments and Agencies collaborate with the EPA - SL at various levels to ensure the protection of the environment. 2008 exclusively deals with the activities and requirements of an EIA while 2010 amendment made to the Environmental Protection Agency Act, 2008 is limited to the administration designation of the Agency's Board Members and the Management

Relevance: With specific reference to the infrastructural subprojects, the categorization in Section 23 (1) provides for the preparation of an Environmental and Social Impact Assessment (ESIA) for projects that are in its First Schedule; however, the overall Construction of one (1) priority facilities, Basic Emergency Obstetric and New-born Care (BEmONC) project at Jojoima, Kailahun District was categorized as category "B".

1.3.8 The National Health Policy, 2002

This policy was designed to motivate and guide the health sector in its effort towards effective and efficient delivery of health services. The police also take cognizance of emerging and broader cross-sectoral challenges as well as the patterns of disease distribution (such as the HIV/AIDS, TB, hepatitis and Malaria) and more general problems that are associated with the epidemiological and demographic transitions.

Relevance: The construction work should take into account the policy provision in terms of ensuring that the contractor and community workers that will be employed for the construction exercise are protected through the awareness raising, wash facility provision, COVID-19 precaution measures and sharing of condoms if found necessary during project implementation. The Contractor and UNOPS should address the challenges of HIV/AIDs, hepatitis and any other communicable diseases during project implementation through the sensitization of its work force and communities within the area of impact.

1.3.9 Employers and Employed Act 1974

The act regulates relations between employers and employees, and safeguards the health of the employed. Sets forth provisions relating to the formation and interpretation of contracts of service, the recruitment of native labour for foreign services, restrictions on the engagement of industrial workers, employment of women, adolescents and child contracts. Also regulates the death, insolvency and change of residence of employer; breaches of contract and disputes between the employer and the employed, provisions as to agents; advances by employers.

Relevance: It emphasises that companies/firms are to involve the local community in their development works within the beneficiary community. In another word, this regulatory framework made provision that would create jobs (temporary or permanent) for youth, women and men of Jojoima and protect the workers through demands for all aspects of cleanliness, reports of all injuries, accidents, diseases and death.

1.3.10 Sexual Offence ACT 2012

Domestic and sexual violence are amongst the many issues that are on the increase and affecting women in Sierra Leone. The Sexual Offences (Amendment) Act, 2019 being an Act to amend the Sexual Offences Act, 2012, has created limits to which cases of sexual violence can be accommodated and dealt with outside the police and court system. There is a provision (as amended in the act) which has instituted penalties and prosecution mechanisms for sexual violence, crimes including aggravated sexual assault and soliciting sex for favour as stipulated in the 2019 sexual offences amendment Act, that will be referred immediately to the police by the compliance team if received.

Relevance: It is based on the fact that infrastructural development or construction activities of any form will bring influx of male workers in the project beneficiary community, and employment gained by them will improve their income which will influence GBV activities such as sexual harassment, sexual exploitation, rape etc. There are not much report of GBV cases in Jojoima community, hence contractors and UNOPS staff are to ensure the workplace is free of any form of discrimination and harassment throughout the implementing phases of this subproject.

1.3.11 Waste Management Policy and Strategic Plan

The Integrated National Waste Management Policy (INWMP) and Integrated National Waste Management Strategic Plan (INWMSP) were developed in 2011 and launched 2012 to serve as a common strategic framework to enhance sustainable management of healthcare, industrial and municipal solid waste for the period between 2012 and 2016. Since the project is to generate some amount of waste during the civil works, the stipulations of the integrated management specified in the plan and policy shall be implemented.

1.3.12 Factories act 1974

The Act provides for the protection of the workers by their employers in aspects such as cleanliness of the work environment, handling of all injuries, accidents, diseases and death during work.

1.3.13 World Bank Environmental and Social Framework (ESF)

The World Bank's Operational Policies (OP) includes guidance on Environmental Assessment requirements. The Bank's Safeguard Policies, (10 no. of them), is meant to ensure that operations of the Bank do not lead to adverse impacts or cause any harm. The following four of the ten are relevant for consideration under this ESMP:

- a. Environmental Assessment (OP 4.01);
- b. Natural Habitat (OP4.04)
- c. Forestry (OP4.36); and
- d. Bank's Policy on Disclosure

a) Environmental Assessment (OP 4.01)

The OP 4.01 requires among others that screening for potential impacts is carried out early, in order to determine the level of EA and propose measures to mitigate potential adverse impacts. But according to the screening exercise for this project was categorised as class B that requires to develop an ESMP.

b) Natural Habitat (OP4.04)

The policy strictly limits the circumstances under which any Bank-supported project can damage natural habitats (land and water areas where most of the native plants and animal species are still present).

c) Forestry (OP 4.36)

The OP 4.36 aims at enhancing the environmental and social contribution of forested areas, and the need to reduce deforestation. The protection of through the control of forest-related impact of all investment operations is a concern of the policy. It promotes the operations affecting critical forest and conservation areas, while requiring that the sector and other relevant stakeholders should be consulted as appropriate.

d) Bank's Policy on Disclosure

The Bank's policy on disclosure requires that all the people residing in the given areas of a project have the right to be informed of the proposed development project in the respective

areas. In this regard therefore, the summary of the study of the development action with other relevant information shall be disclosed to the public prior to construction. The disclosure shall be carried out in Jojoima Kailahun District through the Ministry of Health and UNOPS and the Environment Protection Agency. It shall also be made available at the World Bank and at the affected District Councils along the project area.

2. METHODOLOGY AND STAGES FOR PREPARING THE ESMP

2.1 Introduction

In accordance with EPA-SL Act 2008 as amended in 2010, the team takes full cognizance and consideration of the IFC performance standards and the UN Social and Environmental Standards (SES) and best practice for preparing this ESMP. The objective of the ESMP is not only to obtain the EIA licenses as client's requirement to undertake construction of the health facility and its related work but however, to assess both social and environmental impact of the project activities on the community as opposed to the baseline conditions and to provide practical mitigation measures to offset the risks and impacts. The following stages were followed in this process.

2.2 Stages 1

2.2.1 Screening exercise

Screening exercise was carried out in accordance with the world bank and SL EPA standards. The form was used to pre-assess the project impact and for categorization based on the anticipated impacts. The assessment was done through site visit and inspection and as well reviewing some documents especially those related to the project. The main project development document was also used which furnished the team with information that included but not limited to the size and location of the project. The land use information was also described in the screening form to provide insight for EPA-SL to make a decision on categorizing the project. The screening report was submitted to the EPA-SL upon which the project was categorized as "B" which infers to develop an Environmental Social Management Plan (ESMP).

2.2.2 Scoping stage

In order to identify potential environmental and social impacts of the project activities, the team led by the Senior Environmental and Social Safeguard Specialist proceeded through site visits to the community to conduct a scoping study. At this stage, involving stakeholders and the general public was an important aspect of the Assessment.

Community meetings were held and personal interviews with community stakeholders at Jojoima Township. Main objectives of the community participation were to facilitate the understanding about the project and its potential benefits, social and environmental risks. These meetings gave the stakeholders the opportunity to contribute to developing the mitigation measure with no potential to influence the design. Minutes from the meetings are

summarized in this plan as part of the findings of the studies. The ESMP will be submitted to the World Bank and EPA-SL. The latter will perform a ground-truthing exercise to ascertain the information provided in the plan and shall review and approve the plan.

2.2.3 Establishing Environmental and Social Conditions

This is a critical stage of the process to assess the environmental and social conditions encompassing the physical, biological, resource use, social, cultural, health and economic conditions. To establish these conditions, the consultant assembled both existing information and field studies information. Desk review of published and unpublished documents related to physical and socio-economic condition of the community. During the site inspection, basic data were collected on baseline information. Public participation with local communities was also another key approach for this process. The impacts were analysed and mitigation measures provided that will be adopted by the contractor under the monitoring and compliance audit by the project team.

2.3 Stage 2

This stage sets out the approach and methods that were used to undertake the studies. The information was sourced from desk review of related documents, site inspection to determine baseline environmental and social conditions, and Community engagement in Jojoima community.

2.3.1 Desk Review

The team reviewed published and unpublished similar Environmental Social Health Impact Assessment reports such as, unpublished data, some national policies and reports related to construction of health facilities.

2.3.2 Site Inspection

The visit to the project site provides technical inspections that substantiated the professional judgement in identifying the potential Environmental and Social impacts and to determine the existing baseline conditions of the community. During the site inspection, sensitive receptors were identified in relation to their levels of risks, magnitude and significance of impacts.

2.3.3 Community Engagement

Public participation was treated as a separate component of this process. The team engaged community members that constituted mainly stakeholders through the dimension of conducting community meetings in a “baray” at Jojoima. At least women and youth participation were satisfactory and some stakeholders from the nearby community were also in attendance to discuss the project as thus:

- Project information (donor fund, implementing institutions, and process etc)
- Benefit of the project to the community and its environs
- Recruitment of skilled and unskilled workers
- Methodology for preparing the environmental and social assessment

- Potential social and environment impact on the communities
- Other business

2.4 Public disclosure

Public disclosure meeting is a constituent activity in the implementation of Environmental and Social Management Plan for any infrastructural project. It is mandatory by the EPA-SL act of 2008 as amended 2010 that upon completing the studies, public disclosure meetings should be held to present the findings and result of the ESMP in the project beneficiary community. It is normally done with guidance and involvement of EPA-SL, implementing institution and beneficiary stakeholders. At this stage after submission and review of the ESMP, the public disclosure would then be organized in oneness with the EPA. A meeting would be held to discuss the disclosure process including providing date and number of participants for staging the public disclosure meeting. This process will normally involve two weeks' public notification on newspapers and local radio to notify the public about the event. The disclosure meeting would be organized in the project affected community where the findings will be presented by the consultant. After this process the consultant and UNOPS would then request for a negotiation meeting with EPA to discuss the fees for the EIA licenses.

2.5 Administrative and Institutional Roles and Responsibilities of Key Partners

The responsibilities identified in the table below may not be exhaustive, but highly key elements related to project implementation.

Table 2. 1: Roles and Responsibilities of partners

Institution	Role and responsibility
World Bank Group	The funding institution
UNOPS- United Nations Office for Project Services is managing the project	<ul style="list-style-type: none"> ● UNOPS is the implementing agency for providing Technical Assistance for infrastructure assessment and design of eight (8) pre-selected health facilities and to upgrade three (3) pre-selected health centres ● Coordinate between the financial and the project beneficiaries ● UNOPS has project implementation team consisting of the project manager Engineer who will engage with the activities including regular communication and proactive coordination ● Has the responsibility to manage and oversee the grant activity; which includes the Design, hire contractors, and studies. ● UNOPS will supervises and monitor all implementation activities including ESMP ● Play daily oversight role, monitors the implementation and compliance of the ESMP in the project location, including mitigation measures as set out in the ESMP.

	<ul style="list-style-type: none"> ● Ensure construction works and activities are carried out in accordance with EPA-SL Act 2008 as amended 2010 ● Report environmental and social performance to The World Bank. ● Ensure that health and safety requirements are adhered to
Ministry of Health and Sanitation (MoHS)	<ul style="list-style-type: none"> ● MoHS is the beneficiary institution Responsible for taking part in joint communications and monitoring activities associated with the project. ● Ensure construction works and activities are carried out in accordance with EPA-SL Act 2008 as amended 2010 ● Report environmental and social performance to The World Bank. ● Ensure that health and safety requirements are adhered to
Contractor	<ul style="list-style-type: none"> ● Undertake the construction activities of the health facilities ● Implement the ESMP ● Adopt the ESMP and implement to the fullest ● Comply with the national laws and policies in relation to the construction and EPA
Kailahun Town Council	<ul style="list-style-type: none"> ● Primary beneficiaries of the facilities ● Play community oversight role during construction

3. DESCRIPTION OF PROJECT AREA AND SCOPE OF INTERVENTION

3.1 STUDY AREA

This section describes the environmental and social characterization of the direct influence areas. It also defines the socio-political settings of the community to be impacted. The community under this project is geographically located in Kailahun district, Eastern Province of Sierra Leone. The project site is situated on a relatively flat land in Jojoima town. As mentioned earlier, Jojoima is a town in Malema Chiefdom Kailahun district with an estimated catchment population of 19,632 people. Jojoima town is 40km away from Daru. The community has a mix of amenities including pipe borne water supply system that is not reliable, an existing health center, an electricity power grid under construction by UNOPS. Jojoima community has churches and mosques, market and school which is adjacent to the construction site. The majority of youths are engaged in farming, mining and timber logging whilst the women do petty trading to nearby villages and subsistence farming.



Figure 1. 1 Map of Sierra Leone showing Jojoima on coordinate 7.87815°,-10.78976° in Kailahun district



Figure 1. 2 Satellite image of proposed project site in yellow boundary line and placemark point on coordinates 7.8761974°,-10.7862538 in Jojoima, Kailahun district

3.2 SCOPE OF THE PROJECT ACTIVITIES

3.2.1 Scope of the Project

This subdivision presents the basic concept of the construction and rehabilitation work which provides a brief description of the civil works. It also describes the scope of activities including resources, and materials needed for the construction and operation of maternal health care facilities and its ancillary structures. The section further highlights the project alternative and options.



Figure 1. 3: Cleared and unclear portions of proposed project site in Jojoima, Kailahun district

3.2.2 The Design

Design Principles

The MoHS envisions having a standard design for a BEmONC facility that will provide

quality service taking into consideration the current catchment population of 19,632 people, occupancy rate of 58 people, future growth and capacity needs and building life of 20-30 years. Other considerations that are incorporated in the design are:

Sustainability: Construction system and materials to be employed should ensure durability and reduce costs related to maintenance-related costs

Building orientation: The climate of Sierra Leones which is humid and hot and the design should consider a passive cooling system. Hence, the longer side of the buildings should face north-south with adequate shading devices for the windows and walls to protect from solar gain.

Site planning: to be based on Passive Design Principles for energy efficiency natural cooling system. Where possible fenestrations to be oriented to avoid solar gain and to face the direction prevailing wind, to enable reduction of mechanical systems for ventilation and cooling of the interior of the buildings.

Accessibility: Access to disabled persons

Design adaptation to different site conditions: The design to be produced will give considerations to different topographic nature of sites and ensure that it can be replicated / easily adapt to the different nature of the sites

Roof design: ensure proper ventilation roof area and avoid complicated roof design

Water harvesting system: though the project does not include harvesting and storage of rain water for use, roof gutters are provided in the design for future exploitation of rain water.

Functional layout: inter-relation between functions and the different sections of the facility.

Health and safety aspects: to comply with the MoHS and International IPC standards.

Design Concept

The BEmONC facility will have the following functional units and as shown in the Conceptual Design in figur1.4 below

1. Guard Post and Triage
2. Administration building
3. Maternity, Operating theatre & CSSD building:
4. Ancillary facilities:

Laundry area: Soiled linen receiving and sorting area, soaking, washing and drying area, Provide space for washing machines, Ironing room, Clean linen storage and dispatching area,

Kitchen: Cooking area, store general items, pantry, dish/pot washing area, fuel storage area, and general waste holding area, preparation & dining area and washrooms, traditional kitchen with cooking and fuel storage area (adjacent to the main kitchen)

Store: Central medical and general storage area,

Ambulance bay/garage: Ambulance bay next to administration, Ambulance shed

Waste Management Facility (WMF): Central WMF equipped with low fuel consumption incinerator (De Montfort Mark 9 Incinerator or MOHS stand design for incinerator), Placenta, sharp and ash pits, Waste boxes for general waste and medical waste storage and sorting area, Waterpoint with hose and trough. WMF to have a floor drain for ease of cleaning. Provide a septic tank with a soakaway pit.

Morgue: Morgue + tools store + washroom and shower area.

Water supply: Borehole equipped with pumping system, and an overhead water storage tank.

Electricity/ Power: To include PV Solar system for facility and water pumping system, Standby generator + Shelter + Diesel storage tank with automatic feeder system

Other External works: Fence, landscaping, pavement works/walkways and or driveways, compound fence, guardhouse, parking, Covered walkways/ramps, and stairs to connect the buildings.





Figure 1. 4: Plan and 3-D architectural concept design views of the proposed BEmONC facility

3.2.3 Civil Works

The anticipated duration of the main civil works is five to six construction months starting in February 2021 and likely to end July 2021. The construction work is designed to employ community workers (both skilled and unskilled where applicable). The estimated total work force of 70 is expected to be utilized. It is crystal clear that raw materials are going to be used during the construction phases and will demand the use of timber, sticks, sand, aggregate and water. About 1000-2000 lengths of assorted sizes of timber and wood are approximated to be used during construction. Sand and aggregates will be purchased from a legally operating quarry or industry operating either in the village or within the district. The contractors will use the water that is going to be sourced from a water well very close to the swamp. Women are going to be hired to fetch the water to the construction site. Construction tools and equipment including but not limited to shovels, pick axes, head pans and concrete mixers will be used. Workforces and project personnel will use safety gears including helmets, face masks, ear protectors, safety boots, hand gloves and reflectors during construction. Below are some of the activities that would be undertaken during the construction work and could result to environmental and social risks:

- **Site clearing:** People will be hired to brush, clear and burn fallen trees and shrubs at the site. Cutlass, pick axe and rake etc will be used.
- **Excavation and foundation:** Excavation of soil to an average depth of 1m for basement or foundation for perimeter fence and the main building. A trench box will be provided for workers' safety. Due to the location of the sites, the trench will be provided with crash barriers that will serve as protection for the workers and community health and safety. Leaving trenches open could serve as a predisposing factor that exposes pedestrians especially the adjacent school children, physically challenged and less abled people to danger. It is also noteworthy that water from rains and or construction waste will settle in excavated holes thereby becoming contaminated and providing breeding ground for mosquito parasites. Fortunately, the

project location does not have borne water pipes and as a result of this the project would not be in fare of breaking utility pipes/cables. However, care must be taken during the excavation process in order to avoid damage to any unidentified utilities.

- **Block works:** It involves the manufacture of cement blocks for the construction of the perimeter fence and the main building. Sand, Cement and water are going to be use as the raw materials
- **Lining the channel:** It involves building of the base of all new watercourses and drainages with concrete together with the side walls within the perimeter fence
- **Formwork:** Is used to form the channel profiles and will be removed once the concrete walls have been set.
- **Concreting:** All concreting work will be undertaken with materials (sand, stone, cement water) being mixed at the site location while timber and iron rod will be used for alignment and strengthening respectively.
- **Backfill and Compaction:** At the end of the construction, contractors will backfill with the soils and compact along the drains and level the surroundings. Also, for the perimeter fence, both sides should be backfilled with granite/hardcore with laterite materials and compacting in section bottom and around work area to finish unpaved road level whilst keeping the construction area tidy and safe for community use more especially the school children.
- **Roofing:** This depends on the final design of the structure; it is not clear the pattern of roofing the main building and other structures will have. However, materials such as corrugated metal sheet, timber, saw, hammer, steel and metal nails etc will be used.
- **Painting:** Depending on the nature of the painting that is design in the project document it is expected that the contractors should possess and consider using some of these items (Step ladders and extension ladders, Paint brush, Paint scraper, Triangular-load scraper, Broad putty knife, Wire brush, Long-handled brush, Masking tape, Roller tray and grid, Brush comb etc) for efficient work.

3.2.4 Resources and Material

The construction of buildings and angularly facilities to provide Basic Emergency Obstetrics' and Neonatal Care (BEmONC) Services will utilize both human and material resources during the project. Among other things the following are expected to be in place for the operation of contractors.

- ❖ **Type of Material for construction:** The construction work will involve the use of both local and imported materials including and not limited to cement, steel rod, Timber, sand, aggregate/granite, water etc. All local materials will be sourced in the legal industries. Water will be fetched from the swamp that is 100m off the construction site. In addition to that Groundwater from hand-dug wells or boreholes that would be constructed by the project will be used as the source of water. Pipe borne water from

the local gravity source is also an alternative source of water for the construction work. The sand will be purchased from a licenced local supplier and from the local community. The timber and cement will be purchased from the local market.

- ❖ **Transportation of material:** This will be done through trucks, and light weight vehicles from the marketplace, licenced quarry and sand mine sites to the construction sites. Fortunately, all sites are accessible by vehicle although access can be a challenge during the rainy season that will cause potholes due to the unpaved road leading to Jojoima town. The services of local community labour will be sought from communities affected for offloading of material such as cements, sand, steel rod, timber etc.
- ❖ **Storage of material:** The contractor will engage the community to identify a store within the community for storing all materials and the community would provide custody. It is expected that the community assist in identifying trustworthy persons to serve as local security of the materials.
- ❖ **Works Yard:** A convenient land or place would be identified for the establishment of an operational works yard to facilitate efficiency of the workers.

4. BASELINE INFORMATION

This section reviews information on socio and environmental baseline conditions of Jojoima community. This community will benefit from the construction and rehabilitation health care facility with a perimeter fence and borehole water supply system as the water source.

4.1 Physical Environment

Information on the existing baseline data with respect to physical, biological and human environment in the project areas were collected through desktop review from various studies and site visits.

- a) Topography and Geology
- b) soil
- c) Air quality and wind
- d) Climate
- e) Temperature
- f) Production of Construction Wastes and Management
- g) Noise
- h) Soil Erosion

4.1.1 Topography and Geology

Sierra Leone is located on the West coast of Africa, between the 7th and 10th parallels north of the equator. The country shares borders with Guinea to the north and northeast, Liberia to the South and Southeast, and the Atlantic Ocean to the west. Sierra Leone has a total area of 71,740 km² (27,699 sq. mi) that is divided into a land area of 71,620 km² (27,653 sq. mi) and

water of 120 km² (46 sq. mi)¹. Geologically the country is divisible into three tectonostratigraphic units: the east, where Jojoima community is located is part of the West African craton, the western area consists of the Rockslides, an orogenic belt, and a 20 to 30 km coastal strip of sediments². The general geology of Sierra Leone and the location of the Jojoima in the eastern province is relatively a slope and flat land.

4.1.2 Soil

The project area is endowed with all types of soil, loamy, which has sand, clay and silt and is most favourable for farming. The basic soil within the project site is relatively loose with moderate permeability which can result in high seepage rate.

4.1.3 Air Quality and Wind

For this parameter, observation was made during the field visit as there was no instrument used to measure the quality of air within the communities. However, observations made during the visit to the project site did not notice air emission from vehicles or burning substances but on the other hand, slight pollution from dust as a result of vehicles and motor bikes that seldom ply on an unpaved road especially within the community was observed. There are no specific sources of gaseous or particulate emissions.

4.1.4 Noise

The noise level produced in the project delineation observed during field visit was principally from community activities ranging from sound from community noise and moving vehicles and motorbikes, etc. Without using a sound level meter, the existing noise level was predicted to range between 35-45 dB that does not cause any harm to humans. The subproject beneficiary community is predominantly residential with a community school situated close and adjacent to the proposed facility. It is also predicted that noise will be generated from school pupils during school hours. Hence, the prevailing ambient noise environment would be therefore influenced by noise from mostly residential and school pupils' activities.

4.15 Soil Erosion

The construction activities and more specifically the land clearing activities and the excavation works may modify the drainage and infiltration patterns of the surface water during the rainy season. Also, construction and the use of machinery and management of cuttings and waste material may cause slight erosion and destabilization in the adjacent residence but this will be controlled through infiltration-enhanced pavements in a large percentage of the site during and after construction and excess channelled to nearby wetland.

¹CIA: The World Factbook: Sierra Leone

² Schlüter, Thomas; Martin H. Trauth (2008). *Geological atlas of Africa: with notes on stratigraphy, tectonics, economic geology, geo-hazards, geosites and geoscientific education of each country*. Springer. p. 220. ISBN 978-3-540-76324-6.

4.2 Biological Environment

There is a growing secondary forest at the indirect influence areas of the project in Jojoima making up the rainforest vegetation.

4.2.1 Flora

The project site is located in an underdeveloped community with few houses and other structures however, flora could likely be negligibly affected during clearing of site. The site is predominant with shrubs and few oil palm plantations which would be cleared off for civil work. The distance between the site and the wetland/marshy swamp is about 100-200 meters apart. Consequently, evidence of flora and fauna is less significantly considered in the site

4.2.2 Fauna

The proximity of the project site and its adjacent community is not close to any wildlife reserves. The project beneficiary community is not in close proximity with any recognized and approved protected wildlife areas. The existing community is well built. No domestic animals were observed around during the field assessment.

4.3 Climate and Precipitation or Rainfall in Kailahun District

Sierra Leone is characterized by a tropical climate with two seasons that determines the agricultural cycle. In Sierra Leone, the annual wet season is related to the flow from southwest to northeast of the tropical maritime monsoon, a mass of moisture-laden air that originates over the South Atlantic Ocean. The country is close to the maximum poleward position of the Inter Tropical Convergence Zone, thus, the country observes only two season:-one rainy season that span from May-October whilst the dry season comes in November and ends in April which is caused by movement of the ITCZ away position³. Jojoima is a town in Malema chiefdom, Kailahun district. The topography of the district is undulating, ranging from low lying inland plains to more deserted upland areas with elevation between 600-700 meters altitude. Most of this district has an average annual rainfall of over 2,500 mm, with 80 percent of this average falling during the period of June to November, average annual temperatures vary between 25°C and 28°C with higher values occurring in March/April when solar radiation is most intense⁴.

4.5 Production of Construction Wastes and Management

Most of the households in the project community are not faced with the challenge of disposing off both solid and liquid wastes. During the site visit it was observed that 90% household visits have a place (backyard) for their wastes. The existing community health centre has both incinerators for hospital waste and placenta dumping site/hole. The construction of health centre buildings and ancillary structures produces waste materials which must be safely

³ Report on Environmental Social Management Plan. World Bank-Freetown Emergency Recovery Project (FERP).

⁴Source: Sierra Leone Education For All Fast Track Initiative (EFA FTI) Project,2008

disposed of at identified dump sites. These materials may include scrap metals, nails, pieces of wood, broken glass, pieces of cement blocks etc. If not properly disposed of, these may cause personal injury, and lead to land degradation. The painting and decorative phase of civil works may produce such wastes such as paint, oil, etc. which might find their way into the soil and into nearby streams and polluting them.

4.6 Socio-economic Environment

4.6.1 Infrastructure (housing, road, etc.)

With a population of about 5000, the community infrastructure demand is gradually growing but yet fairly underdeveloped with more dwelling houses and other social services. The project community is underdeveloped with mixtures of houses built of cement, bricks, mud structures etc. it also has an unpaved vehicle road leading to the project site and the community. Jojoima has a pipe borne water supply system, churches, mosques, market and entertainment centre used for watching football matches and other sports. The electricity project contracted by UNOPS is currently ongoing.

4.6.2 Health Facility

The community has an existing community health centre that is headed by a Community Health Officer (CHO). Despite the health centre lacking some amenities, however, there is a solar panel installed to provide electricity and there is a borehole to supply water to this facility. The building has about three rooms that serve as office treatment of patients.

4.6.3 Livelihood and Employment

A mix of economic activities ranging from petty trading at regular and periodic markets to service of transportation and farming or agriculture can be associated with the project community. Farming and agriculture are the major employers of the active labour force in the area. Agricultural activities (backyard gardens) are carried out on a small scale. The community can be very busy with numerous petty trading activities when there is a programme. Most of the trading takes place in the community market whilst others do take place in permanent buildings as well as in temporary structures such as kiosks and on table tops. The items are sold in small quantities and range from groceries to second-hand goods and local food where women dominate. Very few youth engaged in bike riding as their source of income. There are also artisans such as auto mechanics carpenters, tailors.

4.6.4 Gender and Gender Based Violence

Gender-Based Violence (GBV): This is an act of inflicting violence against someone based on his or her gender. Gender-Based Violence (GBV) could be acts or threats of sexual, psychological, and physical violence happening in and around a community. Most often, employment in the construction company is male-dominated because very few women do receive formal education in this sector as engineers, masons, carpenters etc. The disparity in social access to resources and opportunities is reflected in the access to education. This

reflects on the existing gender condition in the project area that most women work in the informal sector engaging in activities such as trading of local foodstuffs that do not offer stable or sufficient income. There is a low risk of GBV in relation to this project. The risks of SH and Human rights abuse are reported as low in the community. However, it is predicted that sexual harassment is likely to occur during the main construction work due to the influx of contractor and other skilled workers. In another word, the works will be contracted to a firm likely coming from outside the community. The relevant conditions for mitigation of the associated risks have been captured in the tender process with more to be followed in the contract.

4.6.5 Educational Facility

There is a community school in the Jojoima located close to the project site. Thus, the project is like to pose low risk/threat to the operation of this school as during the civil/construction works.

5. SUMMARY OF COMMUNITY ENGAGEMENT AND CONSULTATION

This section summarizes the communities' profile, socio-political settings, previous community development work undertaken and discussed the outcomes of the community consultations.

The main purpose of this consultation was to engage the community members on environmental and social issues that may arise from the implementation of the project. It focuses on explaining to members of the community and stakeholders the background of the project given and its feasibility. Community engagement meetings are critical in ESMP as it is intended to put communities to the understanding of how the project will affect them and their level of participation.



Figure 1. 5: Second community engagement & stakeholders' meeting in Jojoima, Kailahun District

Prior to the site visit, the project engineer/ manager at UNOPS set the base for the team by notifying community stakeholders about the visit. The assistant ESSS and the project engineer serve as mobilisers to help in mobilizing the community members. Note taking was done by the team during the meeting. Community participation was at least gender sensitive with 45% women present in the meeting.

The Senior Environmental Safeguard Specialist (SESS) gives a brief background of the project during the presentation underscoring its social and environmental impacts and how the project will benefit the community and its environs and also bringing out situations in which the community would be involved. Discussions with the community members circled around the method of addressing grievance especially those that would be related to gender-based violence and mitigation processes. The participants were given the opportunity to ask questions and raise concerns that were addressed by the project Engineer and the SESS that have pre knowledge of Technical Assistance for Health Centres: Infrastructure Improvement in the Kailahun District project. Key points were summarized in box 1.

Box 1: Key points from community engagement meetings

- All community members and other stakeholder from neighbouring villages present at the meeting were well informed about Technical Assistance for Health Centres: Infrastructure Improvement in the Kailahun District project/works in Sierra Leone and the roles and responsibility of stakeholders including the World Bank Group, UNOPS the implementing institution, Ministry of Health and Sanitation as the beneficiary institution.
- For quality output of the work the community members and stakeholders decided to form a policing committee to serve as a supervising body to ensure what is entailed in the design and BOQ is followed to the letter and utilized properly. It was advised that religious leaders should be part of the community policing team that would be monitoring the project work.
- Community members especially the Paramount Chief requested that their youths should be given temporary employment during construction. The involvement of women in the implementation should be at least 50%. He went on to say that most construction work that he has come across going on in his chieftom, women are highly involved so this project, BEmONC should not be an exception.
- Some communities explained their experiences in community monitoring and policing of civil works.
- Community members asked for the actual commencement date for the civil/construction work and they were in anticipation that work will start the next one month after the engagement meetings.

- The youth leader in his statement buttressed on the quality of the job/facility that was underscored by the paramount chief. As such he said they would prefer more quality work than rush with construction work to produce substandard facilities for them.
- Another community requested to get access or possession of the Bill of Quantity (BOQ) for the proposed building.
- One participant, a teacher emphasized on the bad experience some communities have had with an external (far-way) contractor, hence pleading that UNOPS should contract at least a contractor that is within this district so they can have easy access to just in case the workers are doing the improper job.
- A community elder revealed that it is normally challenging when a community has a far-way contractor working on a project for them, hence the community policing committee should be very proactive to see the success of that project.
- Community members are willing to support the contractors with the construction work at all levels to set a committee that will be supervising the contractors undertaking civil works.
- Participants were informed about grievances that are likely to occur in project implementation especially with regards to Gender-Based Violence.
- The section chiefs and other village chiefs present promised to cascade this information to their members and would encourage them to embrace or take ownership of the project because it's a development meant for their community.
- It was made clear to the community people that there are no project affected persons yet and that the land area to be developed belongs to the existing health centre and also there is a land acquisition agreement for a portion of the community school land.

6. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS IDENTIFICATION AND THEIR SIGNIFICANCE

6.1 Introduction

The impact prediction for these studies is based on the understanding of the environmental and social conditions identified from the qualitative baseline information. Previous sections of this plan have described the project and its related activities and as well the community to be impacted. This section will now identify the potential range of environmental and social issues associated with the project activities, during construction and rehabilitation of the water source, Fence and the main building for the BEmONC and operation phases. The significance of the impacts is determined based on individual magnitudes and the relation to the project influence area. It is the "technical" aspect in carrying out this ESMP. A good impact analysis has subsequently led to evaluating the significance of predicted impacts such as Air Quality, Noise and vibration, Construction solid and liquid Waste, other Land uses, Vegetation (Flora), Fauna (Animal), Community Health and Safety, Occupational Health and Safety;

Gender, Labour and Employment, Underground facilities and Traffic etc. All of these potential impacts of this project activities were identified at the beginning and during the screening exercise.

6.2 Symbols and Coding used in the matrices to rate the significance of the impacts

A colour matrix is used in this plan to identify the interaction between the project activities and the environmental and social characteristics. The colours indicate impact severity as magnitude, extent, etc. However, the colour coding does not distinguish between direct and indirect impacts, and at identifying interactions between impacts. This has been with substantial professional experience in the local knowledge and judgement. Table 6.1 presents standard colours code used to rate the significance of the risks or impacts.

Table 6. 1: Coding for measuring Potential Impact Significant

Potential Impact	Significant	Colour coding
Adverse	Negligible	Green
	Low	Yellow
	Moderate	Orange
	High	Red
Positive	Blue	

6.3 Environmental and Social Risks and their Significance

Table 6.2 presents potential impacts and their significance. It identifies the areas where attention will need to be focused in providing measures and mitigations on the Environmental and Social issues. The Impacts significance are assessed through professional judgment of the magnitude of the impact and the receptor sensitivity and value. It also explains the type of activity that would result in negative effects.

Table 6. 2: Significance of Potential Environmental and Social Risks arising during project cycle

Potential Impact/result	Project Activity	Significance
Dust generation	The dust associated with earth excavation for building the foundation would be limited and temporary and is likely to have minimal impact on the quality of air around construction sites. Continuous exposure to dust particles has the potential to affect the lungs and the heart and can lead to fatalities. Excessive dust can also cause reduction in crop yield by both burying seedlings	Low

	and causing loss of plant tissues thereby reducing photosynthetic activities	
Emission from equipment and vehicle	Using old and faulty equipment, vehicles and machines will emit exhaust fumes (NO ₂ , SO ₂) and contribute to air pollution and respiratory problems.	Low
Noise and vibration	Movement of vehicles, welding machines, heavy duty equipment, tipping of gravel and sand and workers' noise especially during the day will cause discomfort to sensitive receptacles (especially the adjacent community school) and at night to churches, Mosques and community people. Excessive noise could lead to adverse impact in human health.	Moderate
Flora and Fauna	Even though the project location is in an underdeveloped community that has flora like vegetable gardens, they are less likely to be disturbed during construction activities to a level that may have impact on insects, and rodents.	Moderate
Change in land formation	Clearing, Excavation, litters and compacting during construction and rehabilitation. This is likely to occur during the foundation stage by putting piles of soil on the unpaved road and adjacent areas thereby creating an uneven landscape plus erosion.	Moderate
Construction Waste and Waste water	Disposal of construction and canteen wastes within the communities and sites will unintentionally create illegal dumping and messing around the community thereby, inviting pests, rodents, and mosquito breeding place Bulky and sharp objects will become dangerous for community safety. Construction water settled in the drainages will create breeding ground for mosquitoes larval. Littering the work environment could affect the aesthetic of the land and the health of workers. It may cause health hazard and safety risks from rodents and stockpile materials	Moderate
Hazardous/toxic material	Construction liquid waste may contain toxic substance and liquid waste (diesel, used oil, etc.) from vehicle, paint will be toxic to community health	Low

Soil Erosions	Excavated soil if not channelled directly to steep slopes will generate surface runoff on impervious surfaces. The excavated soil if not maintained properly will be scattered on access roads and the work areas thus, formation of ruts, ridges and mounds that could hamper the natural flow.	Moderate
Community Health and Safety	<p>Influx of workers and strangers in the community causing theft issues and all potential Gender Based Violence and Violence Against Children issues are likely to occur.</p> <p>During the perimeter fence construction leaving dug holes unattended can create new potential hazards where adjacent community and school children or less-abled people could accidentally fall into an open trench containing very sharp objects or discharged water</p> <p>Potential incidents and accidents (injury and damage by working equipment.</p>	High
Community Conflict	<p>Managing project expectation to the community is crucial.</p> <p>Conflict may arise between contractors and community people from high project expectation, labour selection, wages, theft etc...</p>	High
Occupational Health and Safety	<p>During excavation, transporting, mixing concretes and all construction activities workers may sustain injury during construction activities. Incidents and accidents causing injuries to workers</p> <p>Chest infection due to inhalation of dust particles paint and other substances.</p> <p>General body pain due to lifting and offloading</p>	High
Accidents (fall from High	. Using scaffold and climbing/step ladder also posed risk of falling from a height if workers are not attentive. Poor site management, keeping the site unclean and unclear from construction waste, equipment and used materials could pose a risk for accidents to workers.	Moderate
Labour and Employment	<p>Selecting community workers and conditions of workers</p> <p>Employing child labourers.</p> <p>Underpayment of labourers and issues of child labour</p>	Moderate

Decommissioning Loss of Job	During decommissioning, Loss of job and income for temporary workers will occur. Withdrawing workers will lead to the disconnection of social networks already created during construction. Loss of job and income for the youths.	Moderate
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Table 6. 3: Potential Impacts during operation

Result/impact	Activity	Potential Significance
Waste management	Operation of health centre building and ancillary structures produces waste materials which have to be safely disposed at identified dump sites. These materials may include medical waste, such as injection needles, syringes, empty cartoons and also canteen wastes.	Moderate

6.4 Positive Impacts of the Project

The project will bring a major positive impact to the community and its environs. Hence, it is developed to strengthen the health system in chiefdom and Sierra Leone as a whole and bring about the necessary changes to the health system in the country in order to deliver better services related to reproductive, maternal, and child health. The target beneficiaries are including but not limited to under-fives, pregnant women and lactating mothers who are at high risk of death. This would subsequently have upgraded the quality of the health and improved neonatal facility and care in the project area. It can also contribute to increased health and social status of the community having obtained a standard health care facility. Provision of temporary employment during the construction phase and permanent job for health workers thus, increase the income level of youth and women

7. ENVIRONMENTAL AND SOCIAL IMPACT ANALYSIS AND MITIGATION MEASURES

This section will also bring out the strategies to manage or mitigate the general and specific impacts or risks predicted to the project activities. The underlying principles of this plan is to firstly seek to avoid potential risks wherever possible. Secondly, if a risk cannot be avoided in all its aspects, the aim will be to adopt measures to minimize that risk; and finally, if the threat or risk cannot be avoided then steps will be taken to mitigate or compensate for the damage caused. Fortunately, from all indications the overall risk can be categorized as moderate and also there is no evidence of high disturbance that would lead to compensation. Table 7.1 provides mitigation measures for all potential impacts identified in Table 6.2. The ESMP Prepared is not only to determine the magnitude and extent of negative environmental and social impacts of the project, but also to identify corresponding mitigation measures that will be put in place to offset, reduce or minimize the impact potentially or likely to arise in the cause of project activities during construction, operation and decommissioning.

Table 7. 1: Potential Environmental and Social Management Risks and Mitigation Measures

Potential Environmental and /social risk	Mitigation Measures	Impact on project phase (construction, operation /decommissioning	Responsible Institution
Environmental			
<p>Dust generation</p> <ul style="list-style-type: none"> • Inhalation of dust may lead to chest infection by workers, pedestrians and the closest objects • Discoloration of moving and stationary objects like houses, and nearby vegetables/plants 	<ul style="list-style-type: none"> • Workers should wear personal protective clothing such as dust masks. Wetting of the soil will be done two times a day • Use of well-ventilated work spaces for sites activities to prevent inhaling toxic fumes • Vehicles transporting sand and other dust generating materials will be fully covered • Alternatively, contractors will ensure the mapping out of vehicular routes to reduce dust to dwelling areas 	Throughout construction phase	Contractor
<p>Noise disturbance</p> <ul style="list-style-type: none"> • Movement and operation of construction equipment and vehicles, activities such as tipping of gravel sand and workers noise especially, in the unlikely event that workers happen to work at night will cause discomfort to community people and sensitive receptacles (school, churches and Mosques.) 	<ul style="list-style-type: none"> • Contractors should maintain a noise level that does not exceed 85 decibels (dB). • Vehicles will be frequently serviced to avoid noise. • The supervising engineer will ensure that all workers wear earmuffs and other personal protective gear/equipment when working in noisy sections. • The use of heavy-duty machinery will be restricted to certain working hours and 	Throughout construction	Contractor

	<p>use the right equipment for the intended purpose.</p> <ul style="list-style-type: none"> ● Workers will ensure that machines are switched off when not in use. ● Loud noise and vibration level activities will be undertaken during off-peak hours during the day (i.e. between 8.00 am and 5.0pm). ● Contractors should not schedule night work for their workers. ● Working hours will be within 7am to 7pm every day and Sunday will be off day. 		
Emission from equipment and vehicle operating	<ul style="list-style-type: none"> ● Workers will wear personal protective clothing such as dust masks. ● Contractors will ensure proper maintenance of machines and vehicles regularly. 	During construction	Contractor
Soil Erosion	<ul style="list-style-type: none"> ● Workers will ensure that surface runoff generated on impervious surfaces is not channelled directly to steep slopes. ● Contractors will maintain the access roads and the work areas on a regular basis to prevent the formation of ruts, ridges and mounds that could hamper the natural flow. ● The contract will ensure daily cleaning of the site with adequate waste disposal to prevent harmful substances leaking into the soil ● Zones within the community susceptible to erosion and unstable soils at the beginning and end of the drain would be avoided. 	During construction	Contractor

	<ul style="list-style-type: none"> • The contractors will direct the surface run-off and drainage waters so that they do not go around sections where the soil is susceptible to erosion. If they cannot be diverted, the contractor/engineer will implement protective measures (such as berm, diversion channels etc) 		
Hazardous/toxic material from cements dust	<ul style="list-style-type: none"> • Workers will always put-on nose marks • They will also wear PPE always during working hours. 	During construction	Contractor
Construction waste management	<ul style="list-style-type: none"> • Contractor will do housekeeping i.e., frequently cleaning the site. • They will sort out the waste and will give all reusable material to community people in need. • This will maximize the rate of recycling of waste. • All wastes containers and areas will be properly mapped and labelled. Incorporating recyclable materials to reduce the volume and cost of new concrete mixes. • Contractor will provide trash can for canteen waste at the site. • All construction waste will be transported to the Licences/approved community landfill or dump sites. • Collecting animal carcasses in a timely manner and disposing them through 	During construction and operation	UNOPS and Contractors

	<p>prompt burial or other environmentally safe methods.</p> <ul style="list-style-type: none"> ● Ensure there is documented evidence of proper disposal of solid waste including construction debris. ● all medical wastes would be managed using incinerator 		
Construction waste water	<ul style="list-style-type: none"> ● Wastewater disposal will be controlled not to over flow in any water body in the adjacent community or drainages. Contractor/workers will avoid community water sources and control sediment discharged from construction water 	● Throughout construction	Contractor
Flora and Fauna	<ul style="list-style-type: none"> ● Contractor/workers will avoid removal of vegetation and shrubs in adjacent areas ● They will clear only areas assigned for works. ● Planting of trees and flowers will be recommended 	Throughout construction	Contractor
Land Use	<ul style="list-style-type: none"> ● Backfill and Compaction: at the end of the day's work, the contractor will backfill with the soils and compact along the drains and level the surroundings whilst keeping the construction area tidy and safe for community use. ● Contractor will negotiate with communities for space for loading and unloading of material and mixing of 	Throughout construction	Contractor

	concrete if the land space assigned to the project is not sufficient to serve such purpose.		
Operational Waste Management (Solid, semi-solid, and liquid)	<p>The design provides for management of solid, semi solid and liquid medical and non-medical wastes that will be generated during the service period of the facility in accordance with the MoHS waste management design manual. These facilities include:</p> <ul style="list-style-type: none"> ● Non-medical solid waste store: to accumulate non-medical solid waste for transportation and disposal to a nearby dump site outside of the facility. ● Incinerator: For incineration of hazardous medical wastes. ● Ash pit: for disposal of incinerated materials ● Sharp pit: for the disposal of sharp materials like needles, surgical blades, etc. ● Placenta pit: for disposal of placentas. 	Throughout operational period	MoHS

	<ul style="list-style-type: none"> ● Septic tank: for the storage and partial treatment of faecal sludge from WCs. ● Engineered soak-away pit: for the storage and biological treatment of grey water ● Infiltration enhanced pavements: to allow for infiltration of large volumes of storm water. ● Stormwater drainage: for the channeling and disposal of excess non-contaminated stormwater into the nearby wetland. 		
Health and safety			
<ul style="list-style-type: none"> ● Occupational Health and Safety (Accidents and Incidents) 	<ul style="list-style-type: none"> ● Contractor will provide health and safety training for all workers prior to construction ● Appropriate use of equipment especially for those use for climbing, electricity tools etc. ● The contractor will provide and orientate each worker with PPE and for visitors ● Contractor will ensure the use of only materials which have an appropriate permission. ● The contractor will provide information on health and safety at site. 	During construction	UNOPS

	<ul style="list-style-type: none"> ● The site supervisor will ensure usage of the PPE ● Contractor will provide proper lighting if working at night ● The contractor will provide OHS plan ● The contractor will provide a first Aid kit at the site. ● And provide water for drinking at sit 		
<ul style="list-style-type: none"> ● Community Conflict. Influx of workers and strangers in the community will result to theft issues and all potential Gender Based Violence and Violence Against Children issues 	<ul style="list-style-type: none"> ● Contractor will do community engagement ● UNOPS will establish Grievance Redress Mechanisms committee in each beneficiary community ● Proper management of project information, expectation and outcomes to the community people will be ensured ● The contractor and workers will avoid unnecessary socialization with the community members 	During construction	UNOPS/SESS
<p>Community Health and Safety issues.</p> <p>Leaving dug holes unattended can create new potential hazards where children or less-abled people could accidently fall into an open drain containing very shape objects or discharged water</p>	<ul style="list-style-type: none"> ● The contractor will provide orientation for workers on construction health and safety. ● There will be a restriction of too many visitors to construction sites. ● The contractor will control the influx of women and children selling food stuff at construction sites. 	Before and during construction	

	<ul style="list-style-type: none"> • Sharp objects and materials will be handled with care and dug holes will be labelled and given danger signs. • Dug holes will be covered before close of the day's work. • They must avoid GBV activities • The contractor will establish good relationship with the community 		
Spread of COVID-19 Influx of construction workers and activities may be risky to contacting the COVID 19	<ul style="list-style-type: none"> • The contractor will adopt the COVID 19 prevention and control measures as indicated in this ESMP and in line with UNOPS which should include regulation washing of hands using soap and water or an alcohol-based hand rub 	During construction	UNOPS/Contractor
Social impact			
Gender- Based Violence issues Influx of workers and strangers in the communities will increase the risk of GBV activities. Provision of job for the male population will increase their income level and power relation	<ul style="list-style-type: none"> • Contractor and workers will receive training on construction GBV and VAC • Contractor and individuals will sign codes of conduct before construction 	Before construction commences	UNOPS
Labour and employment and issues of child labour	<ul style="list-style-type: none"> • The Contractor shall comply with all the relevant Labour Laws and Policies applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety and welfare, and shall allow them all their 	Before and during constructions	Contractor

	<p>legal rights.</p> <ul style="list-style-type: none"> • The Contractor will procure all unskilled labour from the Community • There shall be a binding Contract between the Contractors and all his/her employees. • Employee’s Code of conduct will be prepared to be signed by all workers. • The contractor will give preference to the community if they have the requisite qualifications for employment and will pay community labourers for their services • All unskilled labours will come from the community • They will not employ anybody (child) below the age 18 according to Sierra Leonean Child Right Act 2015 		
Removing underground facilities	<ul style="list-style-type: none"> • Although the site is not expected to have underground facilities however, contractors or workers will be careful in digging/excavating the soil for any object that they may find foreign (archaeological). 	During construction	Contractor
Grievance Redress Mechanism	<ul style="list-style-type: none"> • Contractor to work closely with community stakeholders to form a GRM committee to resolve project related complains • Contractor to do community engagement before commencing works 	Throughout construction	Contractor, UNOPS, and community stakeholders

8. MANAGEMENT OF THE ENVIRONMENTAL IMPACTS

Environmental impacts are costs incurred by contractors while implementing mitigation measures during construction. Usually, environmental liabilities are associated with national or local laws, and are enforced by public agencies such as Environment Protection Agency EPA, Sierra Leone. The UNOPS and MoHS are to provide a complete and accurate environmental liability disclosure (Public Disclosure) to the various stakeholders before the commencement of the project. The contractor is to ensure that the applicable environmental laws are upheld and all mitigation measures are properly implemented and documented on a daily basis.

8.1 Cost for Implementing ESMP

The Senior Environmental Engineer will be required to produce periodic reports on project environment monitoring to be sent to UNOPS and EPA for information and supervision. UNOPS will be responsible for all costs of obtaining the project's EIA license and the actual costs of public involvement (public disclosure) in the EIA process.

Hence, all costs proposed for the ESMP below will be incurred by UNOPS that may transfer all costs to the Contractor except if there is land acquisition and resettlement, which is not anticipated in this ESMP.

The costs to be outlined are current costs, mainly for project environmental monitoring and evaluation to ensure compliance to SL-EPA and international standards and practices.

To estimate future costs, an increase to cover annual inflation should be applied. The costs for actual activities should be included in the main bill of quantities of the project. The cost of implementing mitigation measures works out to **USD 7,000** during the construction phase.

Table 8. 1: Cost Estimates for Environmental and Social Management Plan

Item	Cost (USD (\$))
2. Provision of Water for wetting the ground to reduce dust emission	500
3. Noise Monitoring at sensitive locations at an average distance of 0.5 km	1,500
4. Training of contractors on Health and Safety	800
5. Provision of PPE for workers and visitors	1,000
6. Solid waste management	500
7. Response to GBV incidents including facilitating transport for victim, medical and psychosocial support consultation fees etc. 3,000	2,000
8. Covid-19 Preparedness and prevention (Face mask, hand washing and thermometer)	700
Total	7,000

9. MONITORING PLAN FOR THE ENVIRONMENTAL AND SOCIAL MITIGATIONS

Environmental and Social Monitoring is the key aspect and overall objective for implementing this ESMP. The only way to track the compliance of the mitigation measures and progress of the contractors and workers is by collecting information on issues to be addressed in the ESMP and analyse its outcomes.

The monitoring stages will start before construction, i.e. ensuring that safeguards issues are given due diligence in pre-bidding and bidding processes, preparation of safeguards instruments and developing, monitoring tools and to the end of the construction activities. The UNOPS Senior Environmental and Social Engineer and the project Engineer will be responsible for monitoring the implementation of the ESMP and to ensure compliance. The mode of monitoring and audit compliance are shown in table 9.1.

Table 9. 1: Indicators to be monitored

Focal Areas	Indicators	Methodology	Frequency
Procurement Process-Bid preparation:	Presence of ESMP, GBV and OHS in bid documents.	Review of bid documents and evaluation report	Throughout the bid process
Land: Physical Degradation	Area of exposed surface	Physical inspection	Daily
Waste Management	Bulk of waste	Physical inspection	Daily
Air	Site emission Trapped particles	Sampling Lab test	Weekly
Noise	Noise above 55dB Number of Complaints from the community	Ambient noise monitoring	Daily
Health and Safety	No of PPE issued Utilization of PPE Accidents/Incidents Number of workers wearing PPEs	PPE register Regular inspect Accident Register GRM committee	Daily
GRM	Number of complaints/ grievances registered Percentage of grievances resolved Percentage of grievances redressed within stipulated time period	Review of the following: <ul style="list-style-type: none"> ● Platform ● GRM Logbook ● Period GRM reports 	Monthly

	Time required to resolve complaints (disaggregated by different types of grievances) Percentage of complainants satisfied with response and grievance redress process Percentage of project beneficiaries that have access to the GRM		
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10. MEASURE TO PREVENT RISK OF TRANSMISSION OF COVID-19 AT SITE

During construction, there will be an influx of workers/ workforce gathering to execute works, clients and their representatives will be on site, other implementing partners like suppliers and other service providers and job seekers will all arrive at the site. There will be frequent movement in and out of the site, interaction within workers and other partners are common.

These social interactions will increase possible spread of COVID 19 in the project community and its and nearby villages. The contractor would therefore improve on the following guidelines prepared for safety procedure for the prevention of the deadly COVID 19 pandemic and other disease for this project.

Tips for COVID-19 prevention and containment

The contractor shall ensure that all workers are taking adequate precautions to prevent the transmission of COVID-19 in the work site;

- Workers will be sensitized on COVID-19 prevention and precaution procedures;
- The contractor would not employ any staff that has recently come from or passed through countries/regions with cases of the COVID-19 virus infections (WHO);
- The contractor shall prepare factsheet/information on the pandemic. This information will be posted at project site;
- Contractor would enforce hand washing by providing buckets, clean water, soap, wipes, and hand sanitizers at the site.
- All workers, visitors or passer-by will wash their hands as frequently as possible;
- The contractor must provide thermometer for monitoring workers’ daily temperature and taking records;

- Any worker seen with a symptom should notify the supervisor that he/she is not fit to work
- Any worker seen or complained of symptoms similar to COVID-19 will be immediately isolated and the HS officer will contact the EOC by placing a call to 117
- Workers will be advised to maintain social distance during construction, no hand shake, hugging or clapping hands;
- Contractor will ensure that first aid kit is stocked with adequate supplies of medical PPE, as a minimum including paracetamol/acetaminophen and Ibuprofen;
- The Contractor will keep a daily record of all visitors to the site;
- Contractor will comply with national COVID-19 PPE rules and some of the recommended PPE will include:
 - Face masks,
 - Hand gloves
 - Safety hat
 - Full overall
 - Eye protection (goggles or face screens)
 - Boots or closed work shoes
 - Sanitary package for female workers
 - Visitors should not be allowed to the site if not fully dressed

11. GRIEVANCE REDRESS MECHANISM (GRM)

11.1 Introduction

This section provides Mechanism/Plan for redressing construction related grievance at site. The GRM geared towards addressing construction site -specific grievances and circumstances in a credible, effective and transparent manner which will be sustainable. The GRM would be used by contractors to settle construction related complaints from community, employees and labourers and Gender Based Violence and Violence against Children issues that occur during construction period. This plan also seeks to promote Social inclusions.

11.2 THE GRM Committee

The contractor will work closely with the community stakeholder and UNOPs plus MoHS to establish a GRM committee that will comprise of both project level and community level representatives who will receive and respond to complaints, resolve and make appropriate referral of all GBV and VAC cases. The ESMP has identified the local and project levels tiers structure for uptake of complaints as follows:

Tier 1: Local GRM Committee

The local community level GRM committee is a semi-formal structure to address any form of grievance within these communities. The committee would consist of the following members:

- Councillor
- Local Chief
- Women's group
- Youth leaders
- Contractor
- Police/legal practitioner
- Religious

Tier 2: Project-level GRM Committee

This level of GRM committee is a formal structure set up within the project framework to address any form of grievance that the local GRM cannot settle. The committee will consist of the following members or institutions:

- MoHS Project Manager
- MoHS Social Safeguards and Gender Specialist - **Secretary**
- UNOPS Project Manager – **Chair**
- Environmental engineer

- Project engineer
- Civil Society Organization
- Environmental Protection Agency (EPA-SL)
- Anti Corruption representative if available

The following grievances are anticipated under this project

1. Disturbance of school pupils and some community people from not utilising some portion of the school field for games and sport.
2. Selection of community labour
3. Gender Based Violence

11.3 The Roles and Responsibilities of GRM committee

- ii. Provide information on the GRM pathway.
- iii. Receive compliant and perform fair investigations to address complaints
- iv. Monitor and follow up compliance and resolution processes.
- v. The team shall provide record for the project GRM
- vi. The team will set up a social media communication channel for easy communication.

11.4 How complaints are channelled and resolved.

The GRM committee will receive and register all complaints filed through a ledger book and make available to affected persons. The complaints will be accepted in verbal communications or written complaints and telephone.

Having received and registered a complaint, the committee shall first examine the complaint if it is project related or not. In cases the complaints are not within the remits and are not outrageous, they will be referred to institutions where they can seek resolution. All GBV related complaints will be referred to the nearest police station or project Rainbow Initiative. The GRM committee will ensure appropriate measures to remove the cause of the grievance and initiate a monitoring process to assess any further impacts of project-related work. Once settled, the committee will record the complaint in the ledger book as 'resolved',

12. CHANCE FIND PROCEDURE

12.1 Introduction

A substantial experience of this section is taken from UNOPs chance finding procedure used during the implementation of component 1.1 of the Freetown Emergency Recovery project implementation at the Motormeh site 2018. Similar procedure is expected to be used by the same UNOPS' project, *Technical Assistance for Health Centres: Infrastructure Improvement Project in Jojoima, Kailahun District*

Although the chance to find precise property during construction and rehabilitation of health facilities and other ancillary structures may be very small, however, this chance find procedure would be followed in case of any opportunity to do so. The chance of finding personal, cultural or human remains does not seem possible. But this section describes the measures that would be undertaken to handle any properties that may be found to the owners/family or community

12.2 Setting up of Property Fund Committee (PFC)

- The first step is to set up a local Committee of seven to establish processes for confirming ownership of personal belongings and keeping track of all things found. This will include the councillor, Community chief and/or senior member of Police, including all members in the local GRM committee.
- Publicizing pictures of all unclaimed properties on a dedicated notice board at the site office for a period of three months (or until claimed) and making necessary arrangements for the disposal of any unclaimed items.
- Inventory process and final destination of found and unclaimed items.

12.3 Personal Belongings Protocols

The PFC will identify the owner(s) of the properties that may be found during the civil works. Property Found Committee (PFC) will be led by the councillor, and chief in the community and will also include the MoHS and two members chosen amongst the youth,

12.4 Procedure for all site workers

If any personal property is found in the construction site, the following steps will be followed by contractor site workers:

1. Record the type of property found
2. Give the item(s) a unique registration number and register it in the contractor's ledger book
3. Take a photo and record photo number on the ledger book
4. Handover any found property to the committee led by the councillor, and chief.

12.5 Procedure for councillor, chiefs and community leaders and MoHS

Any property that may be found during the work will be handed over to the Community Leaders on a day-by-day basis. These are the steps that would be followed:

- The property will be handed over to the chief, councillor or any senior member of the committee and sign for it.
- The Chief or senior member of the community signs for receipt of the property in the Property Found Register.
- Chief or senior member of the committee informs the head of the nearest Police post
- All properties found will be stored by the councillor, or chief (Head of the Property Found Committee) until the owner is identified.
- The Committee meets and decides on the best means of identifying the owner of the property. If the owner can be easily found, a message will be sent to them to collect any lost property if the owner cannot easily be identified, an announcement can be made on local radio, newspapers and local communication channels.
- Any individual coming forward to claim found property must have the following: Personal identification (ID cards etc.). For people that might have lost or have no identification, can be guaranteed by either the chief, Pastor, Imam or any legal person (Police or Justice of Peace in the Kailahun district).
- A concrete physical link to the property found: The claimer should be able to describe the item in absentia either in colour, model or brand. All individuals being given found property will be photographed and kept safely for reference. The objective of this is for image tracking. In case another person shows up as an owner or affected family member.

12.6 Procedure for Unclaimed Property

All unclaimed properties should be handed over to the community chiefs/leaders. If no one shows up to claim the property within a period of 6 months, a decision on how to proceed after that will be taken by the community leaders in consonant with the Ministry of Social Welfare.

vii.ANNEX

ANNEX 1: ENVIRONMENTAL AND SOCIAL COMPLIANCE & MONITORING CHECKLIST

Weekly Compliance Auditing Checklist to be used by Environmental Engineer (UNOPS)

Project Title: _____

Site Location: _____

Implementing Stage:

Report Date:

Reporting Time: _____

Reported by: -----

Environmental and Social impact	Mitigation measures	Monitoring indicators	Compliance Status		Remarks
			Yes	No	
Noise	<p>Noise Level.</p> <ul style="list-style-type: none"> ● Control noise from vehicles and equipment ● Noise levels shall not exceed 55 decibels (dB) ● Avoid construction work around residential areas on Sundays 	<ul style="list-style-type: none"> ● Noise allocated by communities and within 55 decibels (Db) 			
Water resource	<ul style="list-style-type: none"> ● Contractor to source water from borehole and swamp. No use of 	<ul style="list-style-type: none"> ● Physical inspection of contractors. storage tank at the site 			

	community's water sources				
Waste water control	Construction waste water should be disposed of to avoid risk to human health and plan	Bulk waste at site			
spoils disposal on the street and adjacent areas	<ul style="list-style-type: none"> • Contractor must identify a spoils disposal site. 	<ul style="list-style-type: none"> • Cleared and cleaned site • Levelled areas and streets after the day's work, 			
Waste management .	<ul style="list-style-type: none"> • All construction and canteen waste are daily dumped in the legal site • Housekeeping 	<ul style="list-style-type: none"> • provide trash can at sites • Clean working sites 			
Occupational Health and Safety issues .	<ul style="list-style-type: none"> • Safeguards training for workers • Ensure compliance of health and safety plan including PPE 	<ul style="list-style-type: none"> • Number of workers trained • Adequate, child and less abled friendly drainage design • Workers wearing full PPE 			
Community Health and Safety issues	<ul style="list-style-type: none"> • Conduct community sensitization • Presences of OHS operational plan. • Avoid construction disturbance to residents and pedestrians 	<ul style="list-style-type: none"> • Number of community meetings held • Number of participants • Presence of alternative route • Number of complaints from communities 			
Erosion	Ensure surface runoff generated on impervious surface is not channelled directly to steep slopes	<ul style="list-style-type: none"> • Exposure of subsurface structures such as roots, foundations, etc. 			

Child labour: The contractor must not employ children for labour	<ul style="list-style-type: none"> • Contractor will not employ a child 	<ul style="list-style-type: none"> • Child labourers identified 			
Social conflict and grievance redress strategy	<ul style="list-style-type: none"> • Community engagement • Proper Implementation of the project GRM 	<ul style="list-style-type: none"> • Proof of community engagement minute/s • Grievance redress record • Number of complaints forwarded to project GRM 			
Labour and Employment	<ul style="list-style-type: none"> • Employment of community labourers 	<ul style="list-style-type: none"> • Presence of community labourers • No of child labourer 			
Gender-Based Violence	<ul style="list-style-type: none"> • Refer GBV cases to the appropriate referral centres. 	<ul style="list-style-type: none"> • Evidence of GBV /VAC code of conduct signed • Incident of GBV reported cases 			

ANNEX 2: MONTHLY REPORTING TEMPLATE

Date.....

Location/ community

1.Introduction
2 Description of Site
3.. Environmental Management
a) Air Quality Management
b) Construction waste management
c) Noise and Vibrations Management
d) Water Resource Management
e) Flooding Consequences on downstream communities
f) Soil Erosion Management
g) COVID-19 prevention measures
h) General quality control
4. Occupational Health And Safety Management
a) Accident and Incident Reporting
b) Usage of PPE
c) Site cleaning and up keeping
d) Material and traffic management
5. Social issues
a) Grievance Redress mechanisms
b) Labour and employment management
c) GBV issues
6. Recommendation

Reference

https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/kailahun_sierra-leone_2408250