

UPDATED

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

FOR THE CONSTRUCTION OF THE

PROPOSED NEW REDEMPTION HOSPITAL PHASE 2

CALDWELL, MONTSERRADO COUNTY, LIBERIA

MARCH 30,2020

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LIST OF ACRONYMS

BOD	-	biochemical oxygen demand
BP	-	Bank Procedures
CMO	-	Chief Medical Officer
COD	-	chemical oxygen demand
DO	-	dissolved oxygen
EA	-	Environmental Assessment
EERP	-	Ebola Emergency Response Project
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
EPA	-	Environmental Protection Agency
EPML	-	Environment Protection & Management Law
ESIA	-	Environmental & Social Impact Assessment
ESMP	-	Environmental & Social Management Plan
ESS	-	Environmental and So
EVD	-	Ebola Virus Disease
IFISH	-	Institutional Foundation to Improve Services for Health
GDP	-	gross domestic product
GIZ	-	Gesellschaft für Internationale Zusammenarbeit (German Development Agency)
ICU	-	Intensive Care Unit
IPD	-	In-patient Department
km	-	kilometer
LMP	-	Labor Management Procedure
m.a.s.l.-		meters above sea level
MOH	-	Ministry of Health
MPW	-	Ministry of Public Works

MWMP-		Medical Waste Management Plan
NDS	-	National Drug Services
NICU	-	neonatal intensive care unit
OB	-	obstetrics
OHS	-	occupational health & safety
OP	-	Operational Policy
OPD	-	Out-patient Department
PCBs	-	polychlorinated biphenyls
PPE	-	personal protective equipment
pm	-	particulate matters
TPH	-	total petroleum hydrocarbon
TSS	-	total suspended solids
VR	-	various receptor
PIU	-	Project Implementation Unit
SITU	-	Severe Inflectional Treatment Unit
USAID	-	United States Agency for International Development
WB	-	World Bank
WHO	-	World Health Organization

EXECUTIVE SUMMARY

Introduction

In 2014, Liberia experienced a severe Ebola Virus Disease (EVD) outbreak, and in response to a call for urgent support from the Government of Liberia, the World Bank proposed a package of short and medium term emergency financing- through the Ebola Emergency Response Project (EERP)-that complimented and supported a multi-partner emergency response effort led by the World Health Organization (WHO). Specifically, the EERP aims to support the Strategic Operational Outbreak Response Plan and provide funding to address key challenges in controlling the EVD. The Project objective is to contribute in short term “to the control of the EVD outbreak and the availability of selected essential health services and mitigate the socio-economic impact of EVD in the three heavily affected countries.

One of such attempts considered by the Government of Liberia to improve the resilience of the health system to future shocks is to empower the Ministry of Health (MOH) identified the construction of the new Redemption Hospital- and specifically, Phase 1- as one of the priority interventions to be funded under the EERP grant.

There is also a Phase 2 of the Redemption Hospital project that intend to add further facilities to those considered in Phase 1. The updating of this ESMP is specifically for the continuation of the construction of phase 2 with support from the World Bank under a new project called Institutional Foundations to Improve Services for Health (IFISH).

IFISH project was requested by the Government of Liberia through the Ministry of Finance and Development Planning to be financed by the World Bank and implemented by the Ministry of Health through its project implementation unit. The project aims to improve health service delivery to women, children and adolescents in Liberia and part of this funding is going to support the construction of phase 2 of the New Redemption Hospital project.

There were additional stakeholders’ engagement that were carried out in the Caldwell community where the Redemption Hospital is currently been constructed under phase 1. Phase 2 construction will be carried out on the same site as Phase 1. The site was acquired, cleared, and fenced prior to the commencement of phase 1 civil works. The purpose of the stakeholder engagement was to inform various stakeholders about the new project, specifically the construction of phase 2 of the new Redemption Hospital, the potential environmental and social risks and impacts as well as health and safety risks the construction activities may have on the environment and the surrounding communities, and solicit their input. key stakeholders such as women groups, youth leaders, elderly, community chairpersons, and other interested stakeholders were present during the consultation to the stakeholders were also informed about

the social economic and health benefit that is associated with the project for the people of Caldwell, Montserrado and Liberia at large.

There is a list of project affected persons (PAPs) and meeting minutes from the stakeholder engagement conducted with the community attached in appendices 3 4 & 5 respectively.

The construction of the new hospital is in line with the MOH Investment Plan for a resilient health system. The new hospital under phase 2 construction cost estimated to about US\$35M, is among the three hospitals (Redemption, J.J. Dossen, Phebe) prioritized in the Investment Plan for upgrading to function at the regional level, responsible to provide tertiary and specialized medical services.

Nature of the Project

The construction of the hospital is expected to be undertaken in two (2) phases. Phase 1 will include the construction of a facility that will hold ninety (90) beds for pediatric care including a pediatric ICU, malnutrition unit, and general pediatric inpatient wards, plus a pediatric emergency department with seventeen (17) observation bays. Phase 2 of the construction activities will include erection of structures to provide for adult services, emergency and trauma care, general surgery, and additional outpatient capacity, adding another 166 beds.

Objective of the ESMP

The main objective of this ESMP is to provide measures to minimize adverse effects on the biophysical and socio-economic environment during construction and operation of the new Redemption Hospital to be located in Caldwell, Montserrado County, Liberia.

The ESMP predicts and describes impacts of the project and outlines the enhancement and mitigation measures to be implemented by the construction contractor, the Ministry of Health and other key stakeholders. These impacts were determined through consultations and field investigations carried out on and around the site earmarked for construction of the new hospital facilities as well as construction materials sourcing areas.

Assessment Methodology for Preparation of the ESMP

The following assessment methods were employed in the preparation of this ESMP:

- i) field assessment of the construction site for the new Redemption Hospital in Caldwell, to appreciate the magnitude of the project activities and determine their environmental and social footprint. The surveys facilitated the collection of biophysical and social data;
- ii) literature review on the policies, regulations and environmental standards for the ESMP preparation. The purpose of reviewing such documents was to develop a comprehensive

and guided policy, legal and institutional framework so that the ESMP is responsive and aligned with government's and financiers' policies;

- iii) interviews with key stakeholders;
- iv) interviews with key informants from the surrounding communities, affected directly by the project; and
- v) assessment of the socio-economic and the health-care systems data and prevailing national regulations, policies and standards.

POLICY, LEGAL & INSTITUTIONAL FRAMEWORK

The preparation of this ESMP takes into consideration applicable policies and legislation in the context of Liberian law. The ESMP draws on the Environment Protection and Management Law of Liberia and other Environmental Guidelines, the Liberian Constitution and recent National Health Policies and Guidelines.

The ESMP for Phase 1 which has been updated in order to include Phase 2 construction activities relied on the World Bank Safeguard Policies. The new project is being developed under the World Bank Environmental and Social Framework (ESF). Therefore, this updated ESMP for Phase 2 includes requirements of the relevant Environmental and Social Standards of the ESF as well as the World Bank Group General and Industry Specific Environmental, Health and Safety Guideline.

Impacts of the Project

Potential environmental and social impacts attributable to the construction of the new Redemption Hospital will emanate from the project activities during the construction phases. The following are identified as potential positive impacts of the project:

- i) Employment opportunities
- ii) Income to material/ equipment suppliers
- iii) Improved medical services

Potential negative impacts that are likely to occur include:

- i) Pollution to air quality, generation of dust, particulate matters and gaseous emissions
- ii) Soil degradation through contamination and disturbance.
- iii) Pollution to water resources: ground and surface water bodies.
- iv) Disturbance to terrestrial ecology and biodiversity
- v) Noise disturbances
- vi) Increased traffic loads and congestion.
- vii) Accidents to workers, staff and public on construction sites

- viii) Occupation safety and health risks
- ix) Community health and safety risks: spread of diseases.
- x) Waste generation
- xi) Risk of GBV and SEA
- xii) Risk of the exclusion of the concept of Universal Access

Management of the Impacts

Considering the potential negative impacts of the project, the environmental and social management plan (ESMP) outlined in Chapter 6 and other chapters set mitigation measures that must be implemented by the Ministry of Health, the principal project contractor and other subcontractors and key stakeholders in order to eliminate or mitigate the impacts on the biophysical and socio-economic environment.

A monitoring plan, which outlines responsibilities for the Ministry of Health and other key stakeholders; along with set monitoring indicators for each of the mitigation measures, have also been provided. It is expected that if the ESMP is effectively and efficiently implemented, the negative impacts will be reduced to low or will be eliminated; such that the new Redemption Hospital will be constructed safe for major negative environmental or social impacts.

1.0 INTRODUCTION

1.1 Project Background

Liberia's economy is projected to contract by 1.4 percent in 2019, following the modest growth of 1.2 percent in 2018. With Gross National Income (GNI) per capita at \$600 in 2018, Liberia remained among 10 poorest countries in the world. Non-monetary poverty indicators, including access to healthcare, education, and basic utility services are also low by regional and international standards, with especially acute rural-urban and gender disparities. The Human Capital Index for Liberia is 0.32, ranking 154 of 157 countries. Though Liberia made significant gains towards strengthening its institutional and organizational capacity in deliver basic and essential health services, these gains were severely eroded by the unprecedented Ebola Virus Disease (EVD) outbreak (2014-16). Among other sectors, the health sector was particularly and heavily affected as it lost an invaluable mass of its skilled human resources and institutional asset base. At the same time the capacity and organizational abilities of the institutions essential for enabling an effective and efficient health system to function were severely depleted. This weak institutional base is reflected in an inadequate health workforce (in terms of adequate numbers, limited skill-mix and distribution, and necessary technical skills to provide quality health care), with no clearly defined career path or incentives to work in the system, and with little accountability and transparency; and dysfunctional management and organizational systems that hinder timely and affordable drugs and services availability to the sick and needy. The country also lost a staggering 10 percent of its doctors and 8 percent of its nurses and midwives to the EVD which is over 8 percent of the nation's health workforce.

Liberia's has 1,072 maternal deaths for every 100,000 births, which is one of the highest maternal mortality rates in the world; and the mortality rate of newborns, within the first 28 days of life, is also high at 37 for every 1,000 live births. A significant proportion of this burden is borne by adolescent girls.

To address some of the key lagging health outcomes in the country, the Government of Liberia prepared and endorsed the Reproductive, Maternal, Child, and Adolescent Health Investment case (RMNCAH-IC-2016-2020). The IC accelerates strategies to improve essential health services nationally, prioritizing six out of fifteen counties with comparatively worse RMNCAH indicators and fewer resources. In addition to the RMNCAH IC, during the last few years, many elaborate plans have been prepared and agreed to improve Liberia's health system and its corresponding health indicators, but binding constraints often hinder the attainment of desired results.

With funding from IDA, this project is designed to support improved health outcomes for women, children and adolescents in Liberia by addressing these key binding constraints and continuing with selected performance-based financing, including ensuring availability of basic essential services, as identified.

1.2 Nature of the Project

The new Redemption Hospital, when constructed, is expected to be a state-of-the-art teaching and tertiary care hospital serving as a regional referral center for pediatric care and women's and maternal health, addressing the severe shortage in access to dignified healthcare in the region. The construction of the hospital is expected to be undertaken in two (2) phases.

Phase 1 will include the construction of a facility that will hold ninety (90) beds for pediatric care including a pediatric ICU, malnutrition unit, and general pediatric inpatient wards, plus a pediatric emergency department with seventeen (17) observation bays.

Accompanying pediatric outpatient services will be provided for follow-up appointments and limited pediatric outpatient care.

Phase 1 will also include the construction of a facility to provide sixty six (66) women's and maternal care beds with a six (6) bay OB triage area - 2 maternal surgical theaters, and 4 delivery bays. Accompanying outpatient services will also be provided. Phase 1 will have 28 beds/cribs for neonatal care including a NICU and kangaroo ward.

Facilities to be constructed for these three (3) departments will work hand-in-hand to provide comprehensive family care for mothers, newborns, and children.

Phase 2 of the construction activities will include erection of structures to provide for adult services, emergency and trauma care, general surgery, and additional outpatient capacity, adding another 166 beds.

The MOH has also identified a need for the construction of facility for mental health care as well as a Tuberculosis inpatient facility. GIZ intends to build an integrated Severe Infection Treatment Unit on the campus, which will serve as an isolation unit during normal operation, but is prepared to be used for future outbreaks of Ebola or other public health emergencies.

All phases of construction will include plans for comprehensive support services to ensure the functionality of the hospital and tertiary level care services. Furthermore, training and educational spaces that are essential to enable high-quality postgraduate training will also be provided on site. A medical library of both textbooks and electronic resources, multiple lecture halls for both residency training and in-service trainings, a simulation lab, a cafeteria, offices for each department, and rooms where residents, faculty members, or other clinical staff can sleep, are some of the spaces that are to be included in the schedule of accommodations. Space for future growth will be identified in the master plan for future needs which are not yet known.

1.3 Objectives of the ESMP

The main objective of this ESMP is to provide measures to minimize adverse effects and risks on the biophysical and socio-economic environment during construction and operation of the new Redemption Hospital to be located in Caldwell, Montserrado County, Liberia.

The ESMP predicts and describes impacts and risks of the project and outlines the enhancement and mitigation measures to be implemented by the construction contractor, the Ministry of Health and other key stakeholders. These impacts were determined through consultations and field investigations carried out on and around the site earmarked for construction of the new hospital facilities; as well as key stakeholder consultations and input from the surrounding communities.

1.4 Scope of the ESMP Study

This ESMP prepared for the construction of the new Redemption Hospital in Caldwell is specifically for the identification of impacts and risks related to construction and operation activities at the hospital; focusing on activities during construction and operation. Preparation of the ESMP included the following activities:

- i) The review of project study reports, relevant literature and government regulations;
- ii) The identification and analysis of potential environmental and social impacts and risks, which the project activities are likely to trigger and generate within and around the project site;
- iii) The determination of appropriate mitigation measures to anticipate and avoid, minimize negative impacts and risks resulting from the proposed development;
- iv) The determination of costs of environmental management activities;
- v) The preparation of this ESMP which details the risks and negative effects of the proposed project activities on the biophysical and socio-economic environment; and
- vi) Recommendations for future environmental protection during operation.

The following activities were undertaken during updating of the this existing ESMP to include construction of the New Redemption Hospital Phase 2:-Stakeholder Consultation involving all key stakeholders identified during phase 1

-Site visit to confirm that the site phase 2 construction will be carried out on land already acquired, cleared, and fenced under phase 1;

-Review of phase 2 project documents to have a sense of the proposed civil works and the applicable ESSs;

- Assess the risks related to GBV and develop an action plan.

1.5 Assessment Methodology for Preparation of the ESMP

The following activities were undertaken during updating of the this existing ESMP to include construction of the New Redemption Hospital Phase 2:

- Stakeholder Consultation involving all key stakeholders identified during phase 1
- Site visit to confirm that the site phase 2 construction will be carried out on land already acquired, cleared, and fenced under phase 1; and
- Review of phase 2 project document to have a sense of the proposed civil works and the applicable ESSs;
-

2.0 POLICY, LEGAL & INSTITUTIONAL FRAMEWORK

The preparation of this ESMP takes into consideration applicable policies and legislation in the context of Liberian law. The ESMP draws on the Environment Protection and Management Law of Liberia and other Environmental Guidelines, the Liberian Constitution and recent National Health Policies and Guidelines.

The ESMP for Phase 1 which has been updated in order to include Phase 2 construction activities relied on the World Bank Safeguard Policies. The new project is being developed under the World Bank Environmental and Social Framework (ESF). Therefore, this updated ESMP for Phase 2 includes requirements of the relevant Environmental and Social Standards of the ESF as well as the World Bank Group General and Industry Specific Environmental, Health and Safety Guidelines.

2.1 Policy Framework

2.1.1 Liberian Policies

2.1.1.1 *National Environmental Policy (2003)*

This Policy aims at improving the physical environment, quality of life and coordination between economic development, growth, and sustainable management of natural resources. Key objectives of the policy include:

- The systematic and logical framework with which to address environmental issues;
- Benchmarks for addressing environmental problems in the medium- to long-term;
- Context for financial/donor support to sectors and non-sector;
- The means for generating information and awareness on environmental problems; and
- To demonstrate Liberia's commitment to sustainable management of the environment.

2.1.1.2 Land Rights Policy (2013)

This Policy was formulated by the Lands Commission of Liberia after several years of operations and stakeholders' consultations. The Policy provides recommendations for land rights in Liberia centered on four basic types of rights: Public Land, Government Land, Customary Land and Private Land. The Policy is a vision statement of where Liberians want to go with their land sector.

The basic land rights principles fostered by the Policy are:

- The Government is responsible for administering and managing land within the territory of Liberia in the public interest;
- The Government recognizes and protects the land rights of communities, groups, families, and individuals who own, use, and manage their land in accordance with customary practices and norms as equal to Private Land rights;
- The Government recognizes and protects Private Land rights; and
- The Government recognizes and protects the rights of the Government to own land.

2.1.1.3 National Health and Social Welfare Policy of 2007

The goal of this policy is to improve the health and social welfare status of the population of Liberia on an equitable basis by: (1) Increasing access to and utilization of a comprehensive package of quality health and social welfare services of proven effectiveness, delivered close to the community, endowed with the necessary resources and supported by effective systems; (2) making health and social welfare services more responsive to people's needs, demands and expectations by transferring management and decision-making to lower administration levels; and (3) making health care and social protection available to all people in Liberia, regardless of their position in society, and at a cost that is affordable to the Country.

The underlying principle to this policy is that health is a state of complete physical, mental and social well-being, and access to quality health and social welfare services is a precondition for individual and societal development.

2.1.1.4 National Health Policy and Plan – 2011 to 2021

This policy builds on the 2007 version of the National Health Policy, the 2008 Governance Commission Report, the 2009 National Decentralization Policy, the 2009 National Social Welfare Policy as well as the 2011 Country Situational Analysis Report.

It draws upon the knowledge gained by implementing the previously mentioned policies/reports as well as from numerous sources of new data about the status of the Liberian population. Thus, the Ministry of Health is confident that this policy's orientation is evidence-based and reflects the best information and guidance available at the time it was developed.

The policy establishes that the health sector can become more effective by:

- a) Improving the timely access to high-impact, evidence-based interventions and strengthening referral between all levels of the system;
- b) Increasing the utilization of services by improving the population's care-seeking behavior, the quality of care and the availability of essential drugs and equipment; and
- c) Improving the coherence between strengthening the existing workforce, producing additional workers with the right skills mix, deploying according to service delivery needs and retaining skilled providers where they are most needed.

The policy also deduced that the health sector can become more efficient by:

- a) allocating resources among counties according to equitable criteria and optimally distributing resources to health facilities according to population size, utilization and workload;
- b) Improving the coordination of all efforts to support health and social welfare services, eliminating duplication and minimizing gaps; and
- c) Creating a culture at all levels of the system that values and strives to do more for the population within existing levels of resources

2.1.2 World Bank Safeguard Policies

The original version of this ESMP was developed under the World Bank's Environmental and Social Safeguard Policies, which seek to prevent and mitigate potential environmental and social impacts and risks associated with the Bank's lending operations that may adversely affect people and their environment. The construction of the new Redemption Hospital Phase 1 triggered the World Bank OP 4.01 (Environmental Assessment), OP 4.12 (Involuntary Resettlement), and OP 4.11 (Physical Cultural Resources), and the New Redemption Hospital Phase 1 project was categorized as B.

2.1.2.2 The World Bank New Environmental and Social Framework

IFISH, the phase 2 project, which includes construction of the New Redemption Hospital Phase 2 is being developed under the World Bank Environmental and Social Framework which came into effect on October 1, 2018. The Environmental and Social Risk Classification (ESRC) of this project is Moderate. All the ten standards of the ESF apply to this project. The relevant standards for this project according to the Bank's environmental and social due diligence include the following:

- i) ESS1 Assessment and Management of Environmental and Social Risks and Impacts;
- ii) ESS2 Labor and Working Conditions;
- iii) ESS3 Resource Efficiency and Pollution Prevention and Management;
- iv) ESS4 Community Health and Safety;
- v) ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;

- vi) ESS8 Cultural Heritage; and
- vii) ESS10 Stakeholder Engagement and Information Disclosure

2.2 LEGAL FRAMEWORK

The Environment Protection Agency Act, Environment Protection and Management Law (EMPL) and sector-specific sections in other legislations are the key instruments that cover environmental management in all sectors of development. They are briefly summarized below, as far as they are relevant now, or in the future, to the construction of the new Redemption Hospital.

2.2.1 The Environmental Protection Agency Act (2002)

The Environmental Protection Agency of the Republic of Liberia (EPA, or Agency) was created in November 2002 under the terms of the Environment Protection Agency Act.

Part II, Section 5 of the Act designated the EPA as the principal Liberian authority for environmental management which shall co-ordinate, monitor, supervise, and consult with relevant stakeholders on all activities for environmental protection and the sustainable use of natural resources.

Part V, Section 37 of the Act defines the requirements of an Environmental Impact Assessment for projects, activities etc. as specified by the Agency. In particular, it states that —a licensing or permitting agency or authority under any law in force in Liberia shall not issue a license for any project for which an environmental impact assessment is required under the Act, unless the applicant produces to the licensing agency or authority an environmental impact assessment license or permit issued under this Act.

2.2.2 Environment Protection and Management Law (2002)

The Environment Protection and Management Law of Liberia is the principal piece of environmental protection legislation in Liberia. It builds on the framework of the Environment Protection Agency Act. In its administration, the law is guided by the principles of sustainable development, the polluter pays principle and the pre-cautionary principle.

Section 6 of The Environment Protection and Management Law requires an Environmental Impact Assessment license or permit for the commencement of projects listed in Annex I to that law. And Section 13 requires the conduct of an environmental impact study for such a project.

Section 12 of the same law requires environmental review for projects that may have significant impact on the environment. The project proponent shall submit to the EPA their plans for improving environmental performance including:

- Identification of the major environmental effects; and
- A comprehensive mitigation plan in accordance with Section 15 of this law.

2.2.3 The Environmental Impact Assessment Procedural Guidelines (2006)

The Environmental Impact Assessment Procedural Guidelines were prepared with joint effort of EPA and other national stakeholders, including line ministries/agencies and the private sectors. The intention of the guidelines is to provide the EPA, sectors agencies, private sector, NGOs, members of the public and consultants a set of approved guidelines for the conduct and review Environmental Impact Assessments in Liberia.

Even though the Environment Protection and Management Law (EPML) provides for a wide ranging responsibility for environmental management by the EPA, one of the most prominent issues is the need for development of administrative procedures for the preparation of EIA to ensure effective environmental governance. The required administrative procedures and how they are arranged to reflect the intent of the law is the subject of the guidelines. These Guidelines will be reviewed periodically and updated when necessary. Hence at present, the EPA is in the process of revising the guidelines. Figure 1 displays the EIA Guidelines as presently implemented by the EPA.

2.2.4 National Gender Policy 2009

The National Gender Policy aims to eliminate the marginalization of women and girls by 2020, among other things by promoting gender-equitable socioeconomic development; enhance women's and girls' empowerment; increase gender mainstreaming in national development; and create strengthen structure, processes and mechanisms in which women participate equally and that ensure that women and men can equally access, control, and benefit from the country's resources.

Section 4.1.9 focuses on sexual and reproductive health, adolescents' right and elimination of harmful traditional practices and gender equalities including supplying free health and clinical services for rape survivors

Section 4.1.6 focuses on human rights and GBV and calls for welfare programs to rehabilitate/reintegrate GBV survivors, establishment of shelters and provision on psychosocial support facilities, and regular conduct of GBV situation assessment. It also calls for strengthening legislations to respond to GBV including rape, sexual exploitation and abuse, domestic violence, early and forced marriage and human trafficking as well as the enhancement of capacity in law enforcement and health care providers to effectively respond to GBV cases

Section 4.1.10 also focuses on responding to GBV that occurred during the conflict through promoting rehabilitation to address psychosocial impacts.

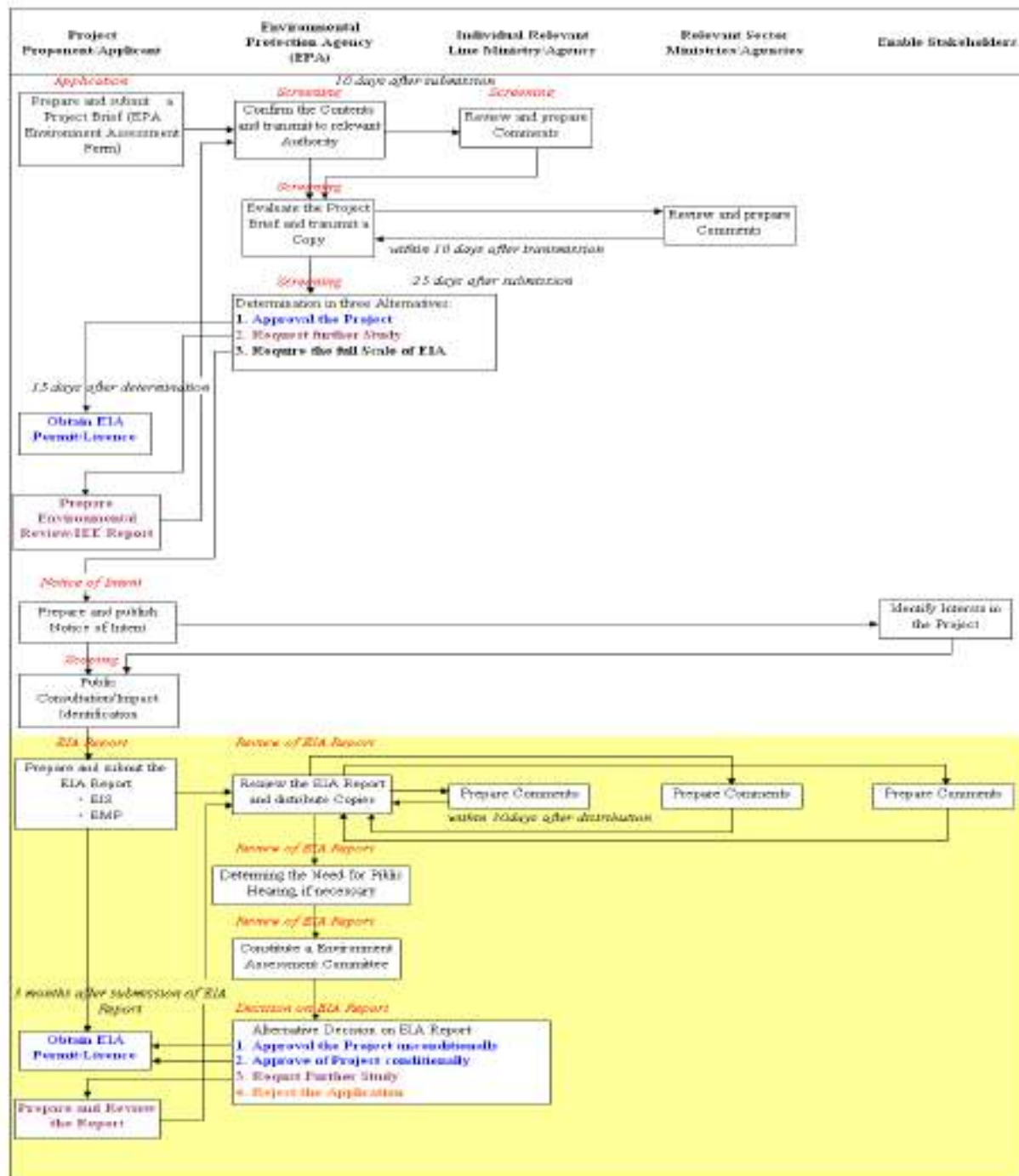


Figure 1 Environmental Impact Assessment Guideline in Liberia

2.2.4 The Public Health Law – Title 33 of the Liberian Code of Law Revised of 1976

This Act provides comprehensive legislation on matters relating to public health, including control of diseases, environmental sanitation and regulation of drug. Part IV regulates health standards and requires, inter alia, persons hired for specified public sector positions to undergo a medical exam. Part VII contains provisions governing the registration and licensing of health professionals and pharmacies.

2.3 Institution Framework

The major stakeholders that will be involved in the construction of the new Redemption Hospital are as follows: -

1. The Ministry of Health (MOH)
2. The Environmental Protection Agency (EPA)
3. The Ministry of Public Works
4. MASS Design Group

The following is a description and main characteristics of major entities responsible for the implementation of the ESMP.

2.3.1 Ministry of Health (MOH)

MOH has the statutory responsibility to manage the health sector of the country. The construction of the new Redemption Hospital will be under the supervision of the ministry. The Ministry has a Project Implementation Unit (PIU), charged with the implementation of civil projects on behalf of the Ministry. The ministry also has an Environmental Department that ensures its adherence to environmental principles. The ministry is the primary governmental entity responsible to coordinate with the World Bank and other major international and local players in the health sector during the implementation of the Project.

2.3.2 Environmental Protection Agency (EPA)

The EPA is responsible for monitoring, coordinating, and supervising the sustainable management of Liberia's environment. It is mandated to ensure the conduct of EIA for projects and programs that are likely to have significant adverse effects on the environment and people.

The EPA is required to issue permit for all major projects, like the construction of the new Redemption Hospital, that are likely to have adverse environmental impact or impact to other land users.

2.3.3 Ministry of Public Works (MP)

The ministry has the statutory responsibility to approve the design and construction of all civil works, including motor road construction. Additionally, it is also responsible to carry out urban and town planning, as well as provide architectural and engineering supervision of infrastructure owned by the Government of Liberia. It is expected that the ministry will review and approve the project design of the new Redemption Hospital and associated infrastructure.

2.3.4 MASS Design Group

Since 2010, MASS Design Group has been working with the Ministry of Health on series of projects and initiatives.

MASS Design Group in collaboration with Rebuilding Basic Health Services (RBHS), an initiative of the John Snow Institute, funded by the US Agency for International Development, has developed Architectural and Engineering Standards and guidelines for all scales of facilities, including clinics, health centers, and hospitals throughout Liberia. The Standards, along with MASS's other efforts in Liberia, has built the capacity, expertise, and effective policy that will tie better built infrastructure to health outcome objectives.

MASS has extensive experience creating innovative, locally appropriate designs, while using locally available materials and construction capacity to inform our work. MASS's strategic partnership with AEP, a highly-regarded Liberian construction consultancy firm, will ensure that the new Redemption Hospital is designed in accordance with all relevant local standards, and is a Liberian solution for a Liberian challenge.

3.0 DESCRIPTION OF THE PROJECT AND COMPONENTS

The construction of the hospital is expected to be undertaken in two (2) phases. Phase 1 will include the construction of a facility that will hold ninety (90) beds for pediatric care including a pediatric ICU, malnutrition unit, and general pediatric inpatient wards, plus a pediatric emergency department with seventeen (17) observation bays. Accompanying pediatric outpatient services will be provided for follow-up appointments and limited pediatric outpatient care.

Phase 1 will also include the construction of a facility to provide sixty six (66) women's and maternal care beds with a six (6) bay OB triage area - 2 maternal surgical theaters, and 4 delivery bays. Accompanying outpatient services will also be provided. Phase 1 will have 28 beds/cribs for neonatal care including a NICU and kangaroo ward.

Facilities to be constructed for these three (3) departments will work hand-in-hand to provide comprehensive family care for mothers, newborns, and children.

Phase 2 of the construction activities will include erection of structures to provide for adult services, emergency and trauma care, general surgery, and additional outpatient capacity, adding another 166 beds.

3.1 PHASE 1 PROJECT COMPONENTS

The following components will be constructed at the lower level of the facilities at the new Redemption Hospital during Phase 1, as shown in Figure 2.

Emergency Access:

Critical adjacencies between the Emergency Department, Operating Theaters, and Labor and Delivery units will be preserved on the ground level to minimize travel distances.

Ambulance access will be on the northwest corner of the site and will be separated from the main entry to reduce congestion.

Inpatient (IPD):

Critical care for inpatients will be provided on the ground level, while most wards will be located on the second level. Pediatric, Maternity, and Adult inpatient departments will each be organized around a department courtyard where covered outdoor waiting areas will be provided.

Outpatient Department (OPD):

Outpatient services will be located adjacent to triage and reception to avoid disrupting inpatient care. Covered outdoor waiting areas will be provided in the entry plaza to accommodate patients

waiting to be triaged, and additional waiting areas will be provided once patients pass through triage.

Support:

Support facilities will be located off of the service road on the northwest edge of the campus.

Severe Infection Treatment Unit (SITU):

The SITU will be located to provide high quality care to patients with infectious disease while maintaining the safety of all patients.

In the event of an outbreak, patients arriving by car or foot will be triaged before entering the campus and then brought directly to the SITU, bypassing other patient areas. Similarly, patients arriving by ambulance will be brought directly to the SITU via the northwest service road.

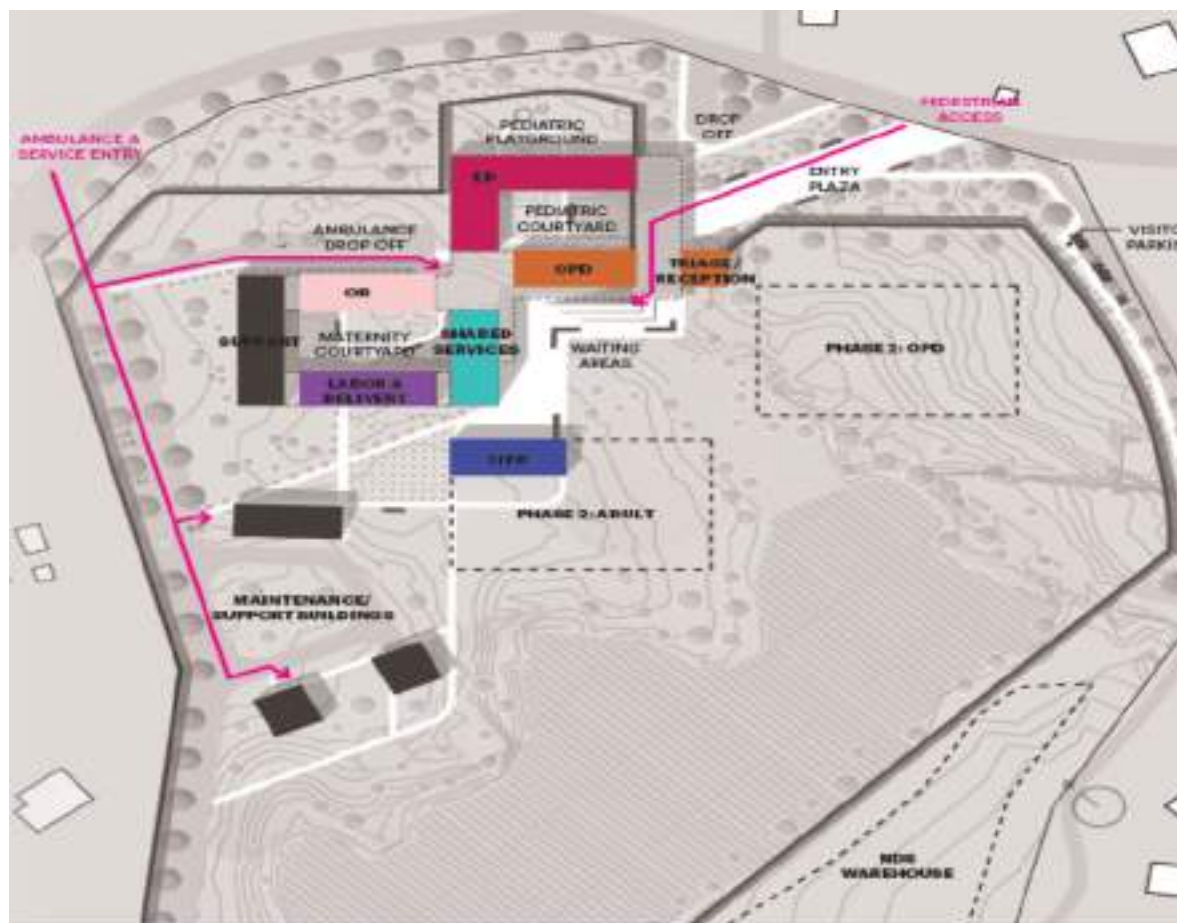


Figure 2 Diagram of proposed structures to be constructed on the lower level of facilities at the new Redemption Hospital.

The following components will be constructed at the upper level of the facilities at the new Redemption Hospital during Phase 1, as shown in Figure 3.

Maternity & Pediatric Wards:

Most wards will be located on the upper level, providing privacy for patients and views to courtyards or wetlands on site. Passively ventilated wards will be oriented perpendicular to the prevailing wind on site to maximize air changes for infection control and comfort.

ICUs:

Neonatal and pediatric intensive care units will be located near the center of the building to provide direct access to the critical care provided below.

Administration + Outreach:

Administrative offices and outreach zones will be located on the upper floor to provide separation from patient care and views to the surrounding landscape.

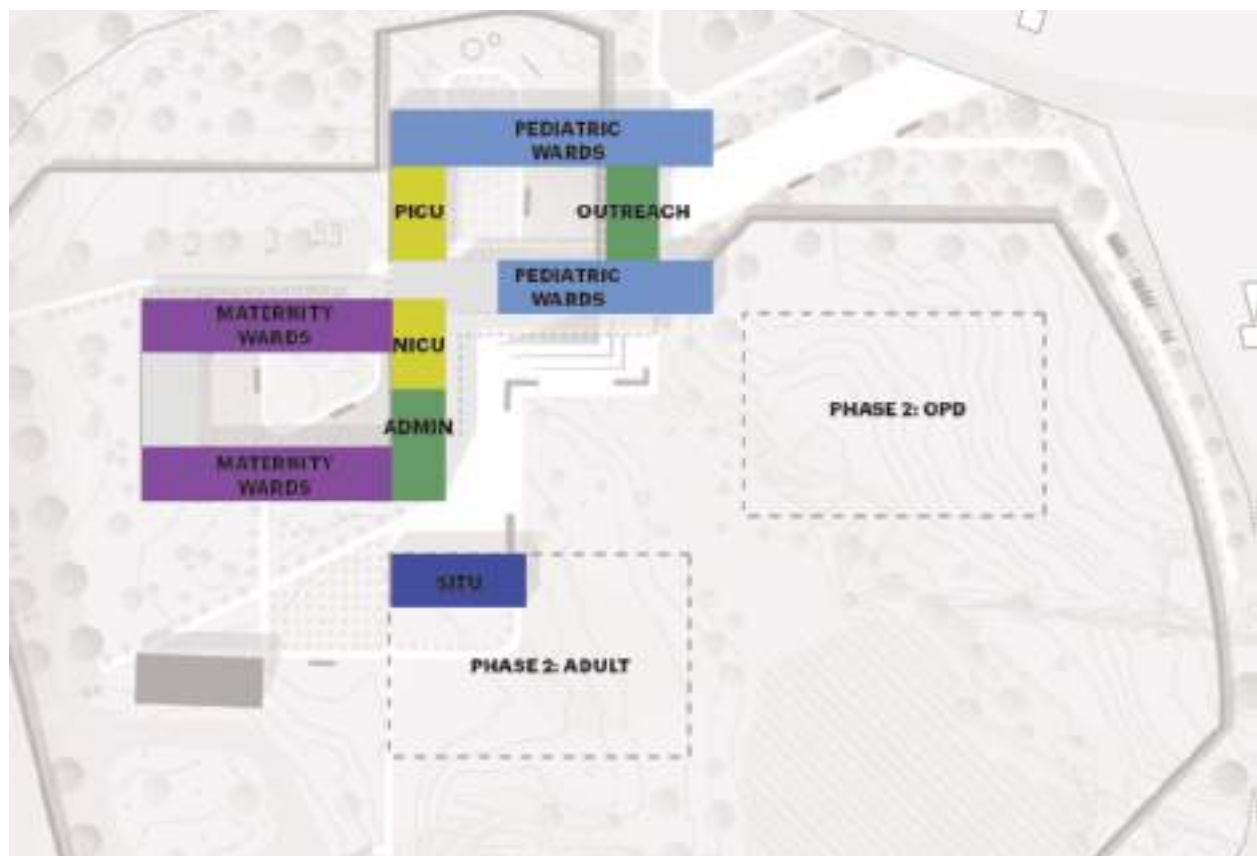


Figure 3 Diagram of proposed structures to be constructed on the upper level of facilities at the new Redemption Hospital during Phase 1 and proposed structures for Phase 2.

3.2 PHASE 2 PROJECT COMPONENTS

The project comprised three components. And each of those components have four or five various sub components. The construction of the phase 2 of the Redemption Hospital is under component 1 of the IFISH project.

Component 1: Improve Service Delivery

Overview

The overall goal of this component is to improve service delivery consistent with the building of resilient healthcare system in Liberia. This component will finance the operationalization of the Redemption Hospital phases 1 and 2, build on and scale-up the successes of primary and hospital Performance Based Financing scheme being implemented in the country, support the national Community Health Assistant program, support improve access to adolescent healthcare through schools and community-based interventions and ensure basic quality of service delivery through increased availability of essential drugs/supplies.

As stated above each of the components have sub components. Subcomponent 1.a: Operationalizing Redemption hospital 1 and 2.

Description:

The project would finance the design, construction and supervision for Phase 2, and procurement of equipment and installation for both Phases 1 and 2. The latter would be phased out based on the respective completion timelines for Phases 1 and 2. Construction of Phase 1 is ongoing, financed by the Ebola Emergency Response Project, and is scheduled to be completed by March 2021. Preliminary design and cost estimates were done for Phase 2 at the conceptualization stage, and these would have to be reviewed, updated, and agreed with the government of Liberia.

Project components to be constructed during Phase 2 will include a large outpatient facility to the southwest of the main entrance. The Phase 1 OPD will be repurposed in Phase 2 to accommodate expansion of the pharmacy and lab. Location of Phase 2 structures can be seen in Figure 3 above.

3.3 CONSTRUCTION MATERIALS

Construction Materials for the new Redemption Hospital, as specified by the designer MASS Design Group, will include the following:

Table 1 Construction Materials for the new Redemption Hospital

Listing of construction materials	Listing of construction materials	Listing of construction materials
Portland Cement	Ceiling Boards	Crushed Rocks (coarse aggregate)
White Cement	Plywood	River Sand (fine aggregate)
Plaster of Paris	Bamboo	Stabilized Earth Bricks
Grout	Terrazzo Tiles	Steel for Reinforcement
Hydrated Lime	Ceramic Tiles	Harvey Firestone Rubber Wood
Masonry Blocks	Roofing Sheets	Electrical Systems Installations
Round Poles	Paints	Plumbing Systems Installations
Timber Woods		Mechanical System Installations

Preference will be given to sourcing construction materials locally.

3.4 CONSTRUCTION WORKS

The new Redemption Hospital Phase II project is still in the early stage of preparation, and the timing and sequencing of construction works are not defined at this stage. Based on the project preparation timeline, the project is expected to be effective in December 2020, and the process of hiring the civil work Contractor would subsequently be initiated. This procurement process as well as mobilization of Contractor on site may last several months. Construction activities are not expected to begin until in the second half of 2021.

3.5 LABOUR FOR CONSTRUCTION

The number of workers to be used will be provided by the principal contractor, depending on its work schedule, technical capacity and experience.

Most of the workers needed during the construction phase will be contracted workers. Contracted workers would be needed for masonry, electrical, plumbing, and support activities. The number of contracted workers will vary throughout the construction period. Based on the experience from the ongoing phase I construction works, which is similar to phase II in scale, the project is expected to hire between 150-200 contracted workers. The project is expected to

attract most of the required labour from Montserrado County particularly Monrovia, where the construction work is located, and other parts of the country. The MOH has develop a Labor Management Procedure, which, amongst other things, describes the project labour requirements and risks, and the contractor will be required to established a GRM for workers prior to the commencement of civil works.

4.0 ENVIRONMENTAL AND SOCIAL SETTING OF THE PROJECT AREA

4.1 Location of the Project

The 35-acre parcel of land intended to host the new Redemption Hospital is located in Upper Caldwell, Montserrado County, near the St. Paul River. The township of Caldwell is a fast-growing region on the outskirts of Monrovia that is easily accessible from New Kru Town and the catchment area of the existing Redemption Hospital via a new bridge and a recently-paved highway.

The area surrounding the project area has only recently been developed with single-family residences. Many of the adjacent properties are used for residential or commercial purposes.

Parts of the parcel have significant tree coverage, and there is a low lying area which fills with water during the rainy season. The site has substantial street-frontage on a large two-lane dirt road which is used to access the river for sand dredging. A single-lane dirt path provides access along the south side of the site. Figure 4 shows an aerial view of the project location relative to the present Redemption Hospital.



Figure 4 An aerial view of the location of the new Redemption Hospital relative to the present Redemption Hospital.

Of the 35-acre parcel of land, the MOH has identified a 5-acre area in the southwest corner of the property which will house the new NDS Warehouse, a project that is funded by USAID and is currently under construction. The remaining land is available for the development of the new hospital campus which will include space for future expansion of the planned hospital.

The eastern side of the site, along the main access road, includes a substantial portion of high ground which is not susceptible to flooding during the rainy season and has good drainage.

Portions of the site also have significant tree coverage, and views to the natural beauty of the adjacent marshland. Figure 5 shows a more detailed aerial view of the project site.



Figure 5: Detailed aerial view of the project site.

4.2 Project Site Development Zones

Nine (9) acres of the 35 acres of land comprising the project site (26% of total site area) are low-lying wetland with standing water during the wetter parts of the year. It is recommended that these areas be left undeveloped, where possible, to minimize ecological impact and cost associated with remedial site work. Figure 6 shows the development zones on the project site.

Another 3 acres (9% of total site area) are adjacent to the wetland are subject to flooding during storms or in the event of a dam breach at Mt. Coffee. This area can be developed but requires significant fill and grading to ensure positive site drainage, which is costly. It is recommended

that development in this area be minimized. However, remedial landscaping can be done in this zone to improve the ecology and appearance.

A total of 23 acres of the site is at a high elevation, has good natural drainage and is considered the prime area for development on site. Of this, 5 acres (14% of total site area) of the site have been set aside by the MOH for the NDS warehouse. The remaining 18 acres (51% of total site area) is the prime development zone and the focus area for planning the new hospital on this site.

A portion of the site was cleared in 2015 which resulted in the loss of existing mature vegetation on the site. Future development should consider retaining existing vegetation and look for strategies to minimize the ecological impact by maximizing the integration of green space into the hospital.



Figure 6 Development zones on the project site:

4.3 Site Accessibility

The project site is located approximately one mile off of Caldwell Road on an unnamed road that is known locally as Sand Beach Road. The Sand Beach Road ends at the St. Paul River, less than half a mile past the hospital site.

An undeveloped dirt track runs along the south side of the site, descending shortly after the site boundary. This road will be widened to accommodate access to the new NDS Warehouse on the southwest corner of the site

4.4 Geology

The project site is located in the geological zone of Liberia known as the Pan African Age Province. Here, there are mainly sediment and rock types less than 500 million years.

Almost the entire project site is composed of river sediments and transported lateritic materials mainly along the roads.

4.5 Topography

The project area has three (3) distinct topographic zones. And these zones have affected the decision for the proposed usage of the 35-acre of land allocated for the construction of the new Redemption Hospital and associated facilities.

There is firstly a zone with an average elevation of 6 m.a.s.l. This zone comprises approximately 9 acres or 26% of the total project area. This zone is comprised of low-lying wetland that has standing water during most part of the year.

The second zone has an average elevation of 10 m.a.s.l. and comprises approximately 3-acre or 9% of the total project site. This zone is adjacent to the wetland and subject to flooding during storms.

Finally, there is a third zone of approximately 23-acre or 51% of the entire project area. This zone has an average elevation of 15 m.a.s.l. and is the prime area for development at the project site. A topographic map of the project area is presented in Figure 7 below.

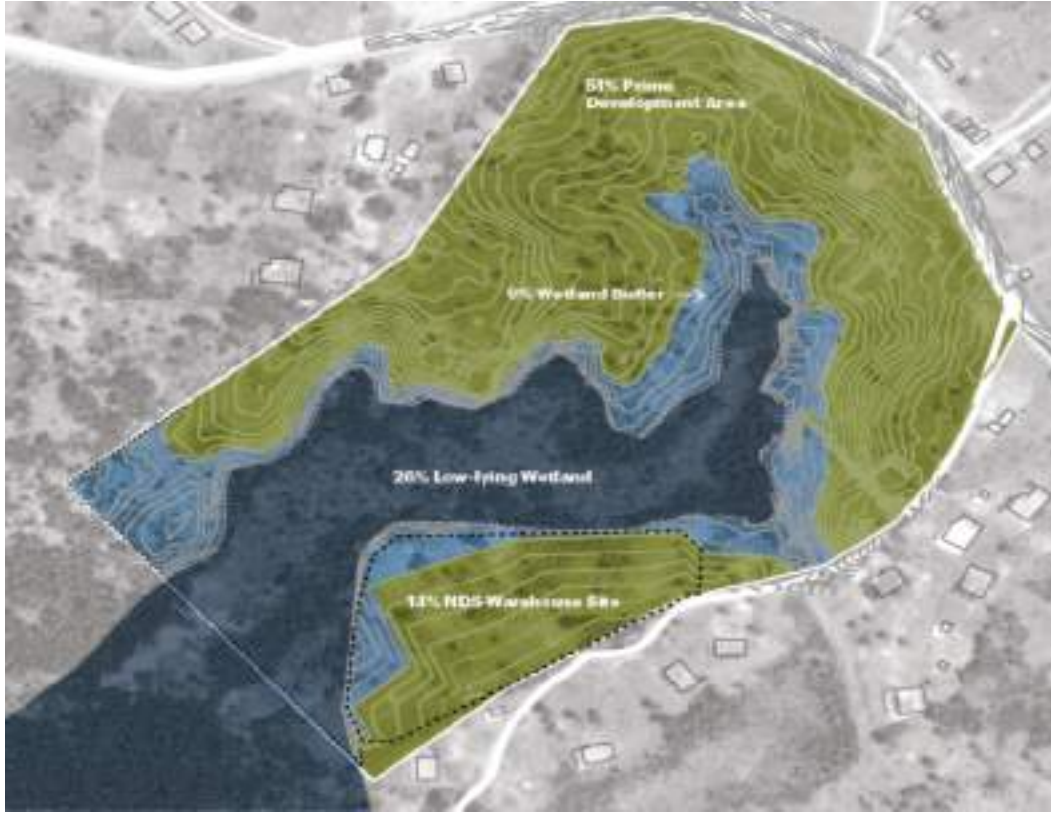


Figure 7: Topographic map of the project area.

4.6 Water Resources and Site Drainage

At approximately a quarter mile from the closest point of the project area towards the northwest is the St. Paul River, one of the largest water bodies in Liberia.

Further, approximately 26% of the project area is comprised of wetland in which there is standing water during the wet periods of the year.

Overall, the site drains from high points located along the eastern border of the site from elevated areas to low-lying land in the South-West.

There is standing water in low-lying areas throughout the year, a condition that is exacerbated and filled further during the rainy season.

4.7 Soil

The major soil type at the project is sediments of river origin, associated with the St. Paul River. This soil type is light in color, composed mostly of silica.

Then, there is a segment of hydromorphic soils (soils associated with wetland and swamps). This soil type is located within the wetland located at the project site. It has a high concentration of humus with layers consisting of biodegradable materials.

4.8 Vegetation

The original vegetation of the project area is believed to be small trees and shrubs. However, significant portions of the project site have recently been cleared of mature vegetation for future development, leaving mostly grasses.

The portion of the site with significant vegetation is mainly around the existing wetland. The vegetation here is mostly palm trees and marshes.

4.9 Air Quality

The air quality for the Caldwell area is generally good as there are no major industries and the number of cars plying roads in the area is small as compared to the City of Monrovia or other major cities nearby.

However, it must be noted that developmental activities are fast expanding into the township. Along with these activities are much more vehicles transporting construction materials and residents moving in with vehicles. These activities could contribute to increased air pollution.

There is also localized air pollution resulting from smoke from the burning of wastes in the open in some communities in the township.

4.10 Climate

The prevailing wind in Monrovia originates from the southwest. Due to the proximity of the project area to Monrovia, it is expected that the area is expected to experience the same climatic conditions as Monrovia. The hospital campus will maximize cross ventilation by orienting long facades of buildings to face the predominant winds to the southwest for improved infection control and comfort.

Liberia has a tropical climate. The warmest months are February through May but the temperature range is fairly consistent throughout the year.

Monrovia is located at a Latitude of +6.31 (6°18'36"N) and a Longitude of -10.8 (10°48'00"W). Orienting the building with long facades facing due south and north would minimize solar gain, however a rotation of 45 degrees to optimize infection control results in only minimal compromise to thermal comfort. Orientation for infection control, therefore, should be considered the priority.

Monrovia is one of the world's wettest capital cities. Very high rainfall accumulation occurs during the summer months of June and July and will require effective stormwater management. Figure 8 show the rainfall and temperature graphs of Monrovia, which is similar for the project area.

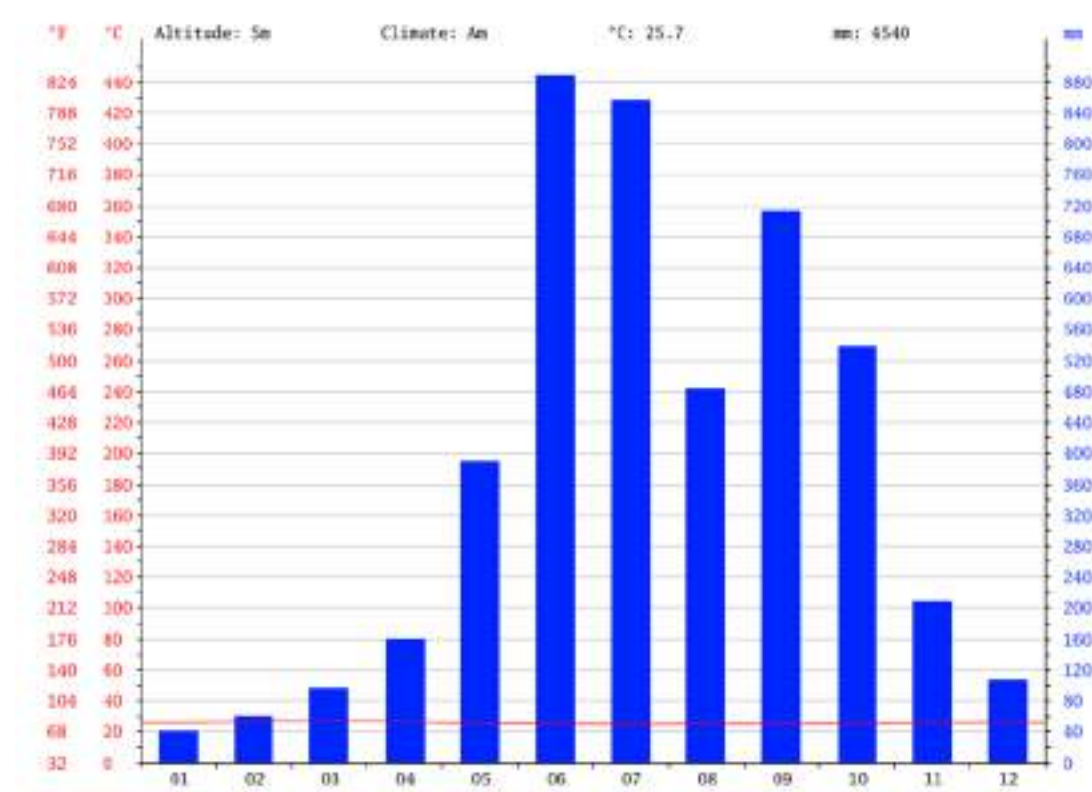


Figure 8: Rainfall graph for Monrovia, which is similar for the project area.

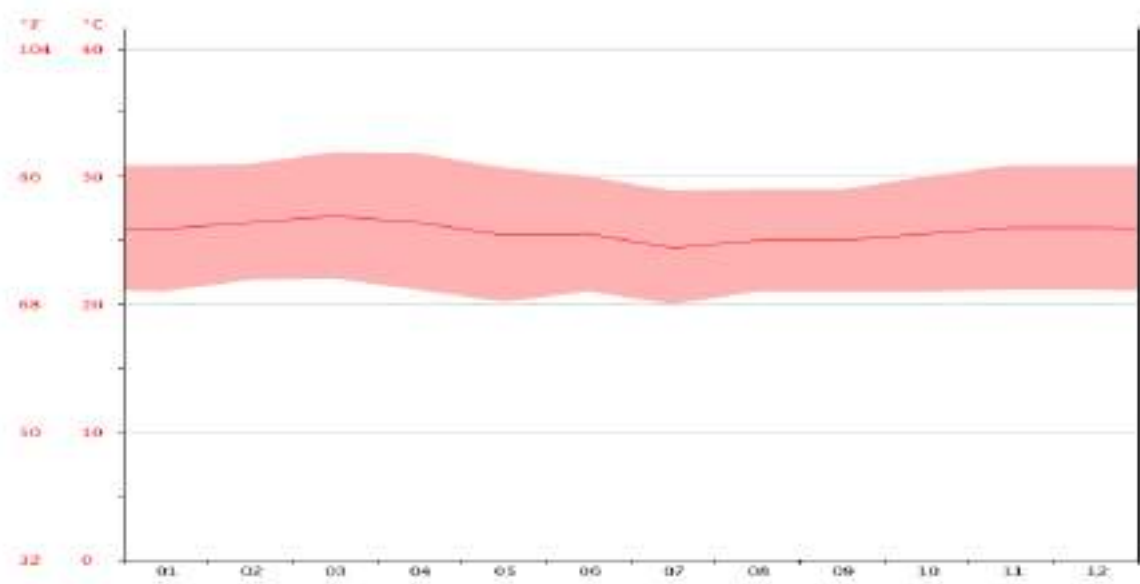


Figure 9: Temperature graph of Monrovia, which is similar for the project area.

Intense rains throughout much of the year provide opportunity for water catchment and storage.

4.11 Socio-economic Characteristics of the Project area

4.11.1 Population

The new Redemption Hospital will be constructed in the Township of Caldwell, which is a part of the St. Paul River District of Montserrado County. According to the 2008 Census of Liberia, the St. Paul River District has a total population of 71,831. Of this number, 34,981 are males and 36,850 are females. Adjacent the St. Paul District is Greater Monrovia, which has a total population of 970,824 – 476,473 males and 494,351 females. The new Redemption Hospital is expected to serve residents of both the St. Paul River and Greater Monrovia Districts.

4.11.2 Administration

Liberia is divided into 15 counties or provinces. The country has a republican form of government composed of three (3) branches. The Executive Branch is responsible for the general administration of the country and executive all laws. The Legislative Branch made of a lower House of Representatives and upper Senate is responsible for the enactment of laws. The Judiciary Branch, overseen by the Supreme Court, headed by a Chief Justice, is responsible for the interpretation of the laws.

The President, as head of the Executive Branch, appoints Superintendents, who administer the affairs of the counties. The counties are divided into districts, headed by commissioners, who are also appointed by the President. The President also appoints a Minister of Internal Affairs who coordinates the activities of the superintendents.

The Township of Caldwell has a commissioner as its most senior government administrator. The commissioner reports to the superintendent of Montserrado County, who also reports to the Minister of Internal Affairs and the President.

4.11.3 Economy

The Township of Caldwell is rapidly developing into an urban community. Majority of the residents have employment in the City of Monrovia and commute there daily.

The economy of Caldwell is based on river sand mining, commerce and industry, and labour and employment. The township also has lodging houses, markets, government offices and non-governmental organizations offices.

The construction and operation activities of the project will have a significant impact on the economic activities in the township because the project is likely to require many unskilled labours who can be hired from the township. The construction activities are also expected to require many cubic meters of sand. Sand mining along the St. Paul River is a major activity in the area.

Cost of living is reported to be very high in the area, as indicated by many of the residents covered during the socio-economic survey. This is in spite of the fact that rehabilitation of the Caldwell road into a paved road over the last few years has served to lower the cost of living somewhat with easy access to commodities and the opening of many business ventures.

4.11.4 Utilities

The site does not have access to public water, sewer, or electrical utilities. The new Liberia Electric Corporation hydroelectric plant at Mt. Coffee is located 15 kilometers up river from the site and the main line from the power plant runs along Caldwell Road. The Liberia Water and Sewer Corporation has a main water supply line running from White Plains Treatment Plant along Caldwell Road. The Ministry of Health intends to work with other Government of Liberia agencies to pave the main access road, and run public water and electricity lines to the site before the first phase of construction is completed.

However, the campus will have independent supplies of electricity and water on the campus to provide back-ups to the municipal systems.

The Ministry of Public Works is expected to pave Sand Beach Road through the Roads to Health program to provide access to the hospital.

4.11.5 Communication

There are over thirty (30) radio stations in and around Monrovia. Majority, if not all, of these stations operate on the FM modular and coverage is limited and vary. Despite, the project area has access to many radio stations. However, most of the stations conduct coverage for limited periods during the day and are closed mostly at midnight.

The area also has access to the major telecommunication companies, namely CellCom and MTN Lone Star. The phone companies also provide internet services.

4.11.6 Education

There is access to public and private schools at the primary and secondary levels near the project area. However, most of the schools, as in many parts of the country, lack many basic facilities including library and laboratory.

There is no tertiary education institution in the area. Residents seeking tertiary education come to Monrovia or other near areas with such institutions.

4.12 Cultural and Archaeological Resources

In accordance with the Environment Protection and Management Law of Liberia, an effort was made to identify elements, objects and sites in the natural environment which are of national importance to the people of Liberia economically, culturally, and environmentally. No such environment was observed.

5.0 RISKS AND IMPACTS OF THE PROJECT AND EVALUATION

Most development activities effect some changes in the natural environment. The extent and nature of the risks and impacts can vary widely depending on the method/technology, the characteristics of the project site and its surroundings and the control and management of the project operation.

This section of the ESMP presents an assessment of the potential environmental impacts associated with the location, construction and operations of the new Redemption Hospital. The procedures used to identify impacts in this report are identified below and includes a standard set of identification tools as well as discussions with specialists and staff of MOH. Potential impacts were assessed against a set of assessment criteria and a significance value was assigned. All of the potential impacts and their significance are presented in a table.

Mitigation measures proposed by MOH to minimize the environmental impacts associated with the construction and operation of the project are presented in Chapter 6. Also, a specific session outlining the intent and proposed form for the construction environmental management plan has been prepared

The ESMP includes all the plans that has been and will be developed to monitor environmental impacts that are predicted to occur as well as proposed mitigation measures.

Finally, it must be pointed out that the construction of the new Redemption Hospital and its operations will be in accordance with Liberia legislations, regulations, guidelines and standards and other appropriate international environmental standards.

5.1 Identification of Impacts

5.1.1 Literature Review

The consultant reviewed a number of documents including the Redemption Hospital Master Plan prepared by MASS. The list of documents reviewed is indicated in the references. The documents were reviewed to assess the conditions of the socioeconomic environment in which the project will be implemented and to describe the activities during the construction phase.

The World Bank's Environmental and Social Standards (ESSs) and other relevant guidelines were also reviewed and have been considered in the mitigation measures for the project impacts.

5.1.2 Site Investigation

Site investigations were carried out to complement the literature review. The consultant specifically conducted the assessments at the proposed project sites and access areas, the nearby stream and the utility systems. The investigations focused on identification of critical

environmental and socio-economic elements likely to be affected during construction and operation of the project.

The site investigation also involved assessment of off-site activities that have the potential to adversely impact the environment. The main activities in this category include local construction materials sourcing. As in Phase I, the Phase II construction activities will not engage in direct extraction of local materials such as crushed rocks, sands, and timbers. The project through the civil works contractor will source these materials through local suppliers. As part of the procurement process, the MOH will be required to conduct due diligence on suppliers of locally sourced materials to ensure that their activities are certified by the EPA and that they are conducted in line with the requirements of ESS6 and other relevant standards prior to procurement of locally sourced construction materials such as timber, sand, and crushed rocks. Evidence of this due diligence to be provided to the Bank.

5.1.3 Stakeholder Consultations

In addition the stakeholder consultations conducted under phase 1, additional stakeholder consultation was recently carried out to inform and solicit views of key stakeholders about the new project, including phase 2 construction works. The purpose of the stakeholder consultation was to inform various stakeholders about the new project, specifically the construction of phase 2 of the new Redemption Hospital, the potential environmental and social risks and impacts as well as health and safety risks the construction activities may have on the environment and the surrounding communities, and solicit their input. Key stakeholders such as women groups, youth leaders, elderly, community chairpersons, and other interested stakeholders were present during the consultation. The stakeholders were also informed about the social economic and health benefit that is associated with the project for the people of Caldwell, Montserrado and Liberia at large. Stakeholder consultations were conducted with key staff of the Environmental Department and Project Implementation Unit of the Ministry of Health along with a gender focus person of the Family Health Division of MOH. Consultation was also conducted with project affected persons in the area.

5.2 Impact Evaluation

5.2.1 Criteria for Evaluating Impacts

The significance of each potential impact will depend on the VR category and the project activities. The impact evaluation will be conducted using the basic set of criteria as follows:

- i) Magnitude: describes the quantity of the resource (VR) potentially affected by the activity.
- ii) Spatial extent: the geographical area over which the impact is experienced

- iii) **Duration:** the length of time over which the impact will be experienced. An impact may be present only while an activity is active, or it could persist long after the activity has ceased, in which case the duration may be regarded as the time the VR needs to recover from the effect.

Evaluation of each potential impact will be done by applying descriptors to each of the above criteria, based on qualitative or, to the extent possible, quantitative evaluation, as follows. The magnitude of impact is allocated one of the following categories:

- i) **Very Low** - A very small proportion of the VR is affected.
- ii) **Low** - A small proportion of the VR is affected.
- iii) **Moderate** - A moderate proportion of the VR is affected.
- iv) **High** - A large proportion of the VR is affected.
- v) **Very High** - A very large proportion or all of the VR is affected

5.2.2 Assessment of Impact Significance

For this report, the final impact significance is the result of the combination of the Basic Impact Index and the VR categorization, as shown in Table 1, where impact significance may result in one of the following classes: Insignificant (IN), Minor (MI), Moderate (MO) or Major (MA).

Table 2: Impact Index and VR Categorization

Categorization	Basic Impact Index					
	N	VL	L	M	H	VH
L	IN	IN	IN	MI	MO	MA
M	IN	IN	MI	MO	MA	MA
H	IN	MI	MO	MA	MA	MA

Impacts rated as Minor, Moderate or Major are considered to require mitigation measures in order to eliminate the impact or, where this is not possible, to reduce their significance ranking to minor or insignificant. These mitigation measures are set out in Chapter 6.1. Further, additional management commitments are presented in Chapter 6.2.

Environmental and social impacts are caused by aspects and can have a direct impact on the environment and social conditions, contribute indirectly to a larger environmental and/or social change, or cumulative. In the present report, the cumulative impact is defined and assessed as

the aggregate of individual impacts of the activities of the project or the individual impacts of the project to those of other surrounding projects or activities.

5.3 Predicted Risks and Impacts during Construction

Construction activities for the proposed project are described in Chapter 3. The construction phase(s) are expected to extend for a total period of two (2) years. The duration of each phase will typically differ. General site grading, construction of access roads, excavations, and foundations of the structures is expected to be less than one year and thus classified as very low. Whereas, the other construction activities duration is expected to be more than fifteen (15) months, yet less than twenty-four (24) months and consequently classified as low. The following discuss the main impacts which may occur during the construction phase(s) of the proposed project.

5.3.1 Air Quality

Dust emissions and gaseous emissions can adversely affect air quality and cause environmental nuisance to the project and surrounding areas. The construction activities that will take place onsite are expected to result in considerable quantities of gaseous emissions.

The contaminants of potential concern during the construction phase(s) may include: NO_x, SO_x, CO and Particulate Matter. Impacts on air quality in the project area could result from all the activities associated with construction activities, except for staffing, subcontracting, and services.

5.3.1.1 DUST AND PARTICULATES

Fugitive dust and particulate matters will be generated during the construction phase(s) of the proposed hospital. This will lead to a localized temporary reduction of air quality, which is considered to potentially affect workers onsite and some offsite receptors such as adjacent road users and residents of surrounding communities. The following are the main impacts expected to result from the generation of dust:

- i) nuisance and disturbance;
- ii) loss of visual amenity through deposition;
- iii) impacts on the health of onsite workers (i.e. increase in allergies, respiratory stress); and
- iv) visual and health disturbances to neighboring communities;

According to the researches, large particles responsible for nuisance dust are most likely deposited within 100 m of the source, while smaller particles can travel up to 1 km. Therefore, the majority of the dust generated is likely to be deposited within the project area. However, there may also be additional dust deposited offsite during material and equipment transport in case of off-road vehicle movement.

Emissions of fugitive dust and particulates will potentially depend on the wind speed and direction and will persist as long as the construction is ongoing. It is expected that dust and particulates are expected to increase temporarily during the construction phase(s).

5.3.1.2 Gaseous Emissions

Another contributor to air quality reduction will be the emissions from vehicle-exhaust during site clearing and grading, transport of material and equipment and due to equipment use. These emissions include:

- i) Sulphur dioxide (SO₂): the amount of SO₂ in exhaust gases is directly dependent on the sulphur content of the used fuel.
- ii) Nitrogen oxides (NO_x): NO_x emissions from equipment or activities contribute to pollution in the form of acid rain, disturbances of the ozone layer and local health problems.
- iii) Carbon oxide (CO): The release of carbon monoxide (CO) occurs as a result of incomplete combustion of fuel in engines.

Emissions of exhaust gases are expected to be generated from vehicles, site machinery, and heavy equipment used for the construction activities. Heavy equipment such as bulldozers will produce exhaust emissions from diesel engines leading to temporary increase in SO_x and NO_x concentrations. Due to the lack of information on the site equipment to be used, it was not possible to provide estimates for exhaust gas emissions for conducting quantitative assessment.

Exhaust gases will lead to a localized temporary reduction of air quality which will persist as long as the construction activities are being undertaken. The reduction of air quality is considered to potentially affect workers onsite and offsite receptors such as adjacent road users and surrounding communities. Emissions of vehicle exhaust gases during the transport of equipment and material are expected to occur throughout the construction phase(s) and their impact is expected to affect some receptors outside the project area.

It is also worth mentioning that the levels of SO₂, NO_x, and CO are expected to temporarily increase during the construction phases. However, the significance of impacts from the different construction activities is expected to be Moderate and for a short term.

5.3.2 Soil

Construction activities may affect soil characteristics; it may also affect the current or future land-use in the vicinity of the project area. Impacts on soil and land-use may result mainly from the general site clearance and grading, construction of access roads, excavations, and foundations of structures.

Excavation and movement of heavy machinery on unpaved surface soils during site preparation and foundation-laying could cause a physical breakdown of soil particles potentially causing destabilization of the soil structure. The resulting breakage of soil particles may render the soil

more susceptible to erosion by exposing the finer grained materials to wind. However, temporary ditches, sediment fences, and silt traps will be installed as necessary to control soil erosion or displacement due to site preparation activities.

The impacts from the specified construction activities are expected to be restricted to localized areas throughout the construction phase(s), and considering the low sensitivity of the soil, the impact on soil from these activities is considered to be Minor.

5.3.3 Water Quality

There is a body of surface water on the project site, as well as ground water. Hence, this section discusses the impacts on groundwater and surface water resources at the project site.

5.3.3.1 Groundwater

Impacts to groundwater quality during the construction phase(s) may result from incidental spills at onsite maintenance locations/workshops for construction. Such impact could result in introducing organic matter, hydrocarbons (oils), coliforms or heavy metals to the shallow groundwater aquifer. Organic or hydrocarbon contamination could increase the biochemical oxygen demand (BOD) load on the groundwater. The shallow groundwater in the project area will not generally be used for drinking. However, due to proximity of the site to surrounding residential communities where ground water is used for drinking and other domestic activities, contamination of the ground water could lead to brackish water for these communities.

Despite the medium sensitivity of the shallow groundwater, the impact is expected to be of localized nature (limited to the project area). Consequently, the significance of impact on groundwater is expected to be **Moderate**.

5.3.3.2 Surface Water

Of the 35-acre site, 9 acres (26% of total site area) are low-lying wetland with standing surface water during the wetter parts of the year. It is recommended that this area will be left undeveloped, where possible, to minimize ecological impact and cost associated with remedial site work.

Impacts to surface water quality during the construction phase(s) may result from incidental spills at onsite maintenance locations/workshops for construction. Such impact could result in introducing organic matter, hydrocarbons (oils), coliforms or heavy metals to the surface water. These activities also have the potential to pollute groundwater resources.

The impact on the surface water due to the construction activities is classified as Moderate. However, mitigation measures to be applied are presented in Chapter 6.

5.3.4 Terrestrial Ecology and Biodiversity

The proposed project site is mostly sparse vegetation – grasses and shrubs- was cleared during Phase I construction. This resulted in the loss of existing mature vegetation on the site.

No protected species have been observed onsite and their presence is not expected within the project site.

The impact of the different construction activities on the terrestrial ecology and biodiversity is expected to be Insignificant in the construction site. However, improper sourcing of locally sourced construction materials such as timber, sand, and crushed rocks may have adverse impacts on biodiversity in other sites

The site for phase 2 construction works was acquired under phase 1. The site was cleared and fenced since 2017. The phase 2 construction works do not require additional land take that could involve land clearance and its associated impacts on flora and fauna. Due diligence of sources of local material such as sand and crush rock was carried out for phase 1 construction activities. Similar due diligence will be conducted once the phase 2 Contractor is procured and prior to the commencement of civil work to ensure that suppliers of these locally sourced materials are in compliance with the relevant environmental laws and regulations of Liberia as well as the World Bank's ESSs.

5.3.5 Human and Socio-economic Environment

Valued receptors evaluated in the context of this impact assessment include economic activities, traffic, and population living in surrounding communities. Impacts could result from the following project activities: staffing, subcontracting; and services.

5.3.5.1 Population

The assessment of the project components identified several potential risks and impacts to the population in the project area related to (i) non-discrimination and inclusion of vulnerable and disadvantaged groups – this will be particularly relevant to the component that supports adolescent reproductive health and teenage pregnancy, given the extensive stakeholder engagement and communication/messaging on social norms and behavior change; (ii) labor and working conditions (ESS2) of project direct workers, including staff of project implementing agency, and contracted workers under project components on the human resource management and the Redemption Hospital Phase II construction; and (iii) community health and safety (ESS4) under supply chain management component – disposal and management of medical waste, lack of awareness among people, lack of medical waste disposal sites, proper waste management procedure for unused, expired and damaged drugs, may pose risks and threats for community

health and safety. The project risk for causing or increasing Gender-Based Violence and Sexual Exploitation and Abuse relied on the World Bank's GBV risks screening tool. The GBV risk for the project is categorized as Moderate and details about GBV risks assessment is presented in Annexure 4. These risks and impacts to population will be mitigated by measures provided in Chapter 6 of the ESMP and the Contractor's Environmental, Health and Safety Plan.

The construction period though limited, is expected to have impacts on population, this impact is expected to be of Moderate significance through all project aspects during construction phase(s).

5.3.5.2 Economic Activities

Economic activities near the project area may be affected during the construction phase(s) of the project. There will be benefits for the local community resulting from operation of food centers and merchandise commercial stores, as well as services and subcontracting local contractors.

Moreover, during the construction phase(s), the project will create employment opportunities by offering approximately 150 job opportunities directly in industry and will indirectly offer many employment opportunities. Therefore, it is expected that there will be Positive benefits for the local community in terms of employment and income for the local economy. Employment prospects will exist for skilled and unskilled labour, and caterers. Every attempt will be made to recruit qualified local construction personnel wherever practical. Training may also be provided that is necessary for many of the new staff, and new skills and techniques will be transferred to the local market. These activities are expected to result in Positive impacts and are not subject to further assessment

5.3.5.3 Traffic

Delivery of construction materials and equipment to the construction sites will be by road transport. The transportation of material and equipment to the construction sites will cause temporary increase in traffic along the roads.

Given that these activities will occur through the construction phase even though the impact extends outside the project area, thus the impact expected on the traffic conditions is Moderate.

An evaluation of the potential impacts during the construction phase(s) discussed in this section is presented in Table 2. Mitigation measures to reduce minor, moderate, and major impacts are identified and presented in Chapter 6.1. Moreover, environmental and social commitments can be found in Chapter 6.2.

5.3.5.4 Cultural Heritage

The assessment carried out during the ESMP preparation did not identify any cultural resources (tangible or intangible) on the project site. The civil works will involve large excavation and therefore the potential to discover chance finds exists. The ESMP includes a Chance Finds Procedure that outlines the steps to

follow in case artefacts show up during excavation works. The steps include procedures to: a) stop work, b) safeguard identified artefact, c) report identified artefact, and d) resume work.

5.3.5.5 Sexual Exploitation and Abuse (SEA) and Gender-Based Violence (GBV)

The assessment carried out during the ESMP preparation identified that there is a risk of SEA of women and girls in particular during the construction phase for the Redemption Hospital. This is particularly related to issues around predominantly male labor influx, combined with the relative economic vulnerability of women and girls in the project area.

Table 3: Evaluation of potential impacts during the construction phases

Project Aspect	VR	Impact	VR Category	Magnitude	Extent	Duration	Significance
Staffing	Economic Activities	Employment and income	High	-	-	-	Positive
Subcontracting and Services	Economic Activities	Income to local community	High	-	-	-	Positive
General site grading, construction of access roads, excavations, and foundations of structures.	Air Quality	Reduction of air quality due to emissions, dust and particulate generation	Medium	Moderate	Low	Very Low	Moderate
	Soil	Degradation of soil quality	Low	Moderate	Low	Very Low	Minor
	Water Resources	Contamination from sanitation facilities or construction works	Medium			Minor	Moderate
	Terrestrial Ecology and Biodiversity	Loss of terrestrial habitat and flora	Low	Low		Very Low	Insignificance
	Population	Nuisance to population	High	Low		Very Low	Moderate
	Traffic	Increase of traffic due to construction material and equipment delivery	Low	Low		Very Low	Moderate

5.4 Predicted Risks and Impacts during Operation

The assessment identified several risks and impacts associated with this project during operation. The main operation phase risks and impacts include:

a) Generation disposal of health-care waste: Health-care waste constitutes an important factor concerning environmental degradation, a factor of significant health risk threatening peoples' quality of life. Thus, managing correctly this specific kind of waste should represent an important concern for the project. The wastes generated by the facility will include both general (non-hazardous) and hazardous wastes. Improper management of these wastes can lead to adverse health and environmental impacts resulting from the unintended release of chemical or biological hazards, including drug-resistant microorganisms, into the environment thus posing risks to the health of patients, health workers, and the general public. The MOH has developed a Medical Wastes Management Plan (MWMP) for Liberia. The Plan was developed under another World Bank financed project, the Liberia Health System Reconstruction Project (P105282), and updated and re-disclosed under another World Bank financed project, the Ebola Emergency Response Project (P152359). The Plan has been revised to cover the health-care activities under this project.

b) Occupational Health and Safety (OHS) risks to healthcare workers: major hazards exist in hospital environment that may expose workers and patients to different types of risks. These hazards include: exposures to infectious and chemical agents; lifting and repetitive tasks; slips, trips, and falls; occupational violence; and risks associated with poor design of the workspace. These can lead to infections such as hepatitis, musculoskeletal injuries, stress and serious injury such as fractures from exposure to occupational violence, acute traumatic injury and even death. Some measures are provided in the mitigation section of the ESMP to manage these risks and hazards. The MOH will develop a comprehensive OHS Plan that covers these OHS issues during operation.

c) the risk of the exclusion of the concept of universal access in the design of the hospital: the MOH will ensure in the design of the facility universal access which includes unimpeded access for people of all ages and abilities in different situations and under various circumstances. The risk will be mitigated during the procurement of the design contractor and during the design. The MOH will include in the Employer's Specifications universal access requirements to ensure the facility design incorporates the concept of universal access.

6.0 ENVIRONMENTAL & SOCIAL MANAGEMENT PLANS

6.1 Management Plan/Mitigation Measures during construction

This section considers mitigation of the significant potential impacts resulting from the construction of the new Redemption Hospital that were identified and evaluated in Chapter 5. These measures and/or procedures are meant to be considered and adopted as appropriate by MOH and the principal contractor during the construction phases of the proposed project. Many of these have already been included as part of the project plan but are reiterated in this section with reference to specific potential impacts. The main objective of the mitigation measures is to reduce the significance of the potential impacts to an acceptable level for all aspects of the project in relation with the receiving environment.

Mitigating measures and procedures are grouped according to the VRs (air, soil, water, ecology, and human environment).

6.1.1 Air Quality

As previously shown in Section 5.3.1, dust generation as well as exhaust emissions are the potential sources of impact on the air quality in the project and surrounding areas. It is not expected that these emissions will have a long-term impact on the atmosphere due to the short duration of the construction activities (approximately twenty-four (24) months).

6.1.1.1 DUST AND PARTICULATES

Although no baseline data was collected, the air quality in the project area can be considered good as the site is very far from industrial activities. Therefore, mitigation measures will be adopted during the progress of the construction phase(s) to reduce air pollution and to maintain the current air quality within the acceptable limits.

It is recommended that the following management and control measures are adopted during the construction phase(s):

- i) Monitoring of wind speed and direction to manage dust-generating activities during undesirable conditions.
- ii) Dust suppression should be undertaken where necessary by covering and/or spraying affected land surfaces with water.
- iii) Prevent offsite migration of dust using appropriate screens.
- iv) Use or establish hard-covered roadways for vehicle movement.
- v) Vehicle speed restrictions should be applied across the project site to avoid excessive dust generation.

- vi) Trucks transporting excavated soil and other construction raw material to and from the site to be covered to minimize fugitive dust emission.
- vii) Minimize unnecessary journeys.
- viii) Cover all onsite construction material and construction waste storage/stockpiling locations.

6.1.1.2 Gaseous Emissions

The expected emissions originating from the machines and equipment are CO, CO₂, NO_x, and SO_x. It is recommended that the following mitigation measures are adopted during the progress of the construction phase(s) to reduce air pollution and to maintain the current air quality condition:

- i) Use low Sulphur content fuel, when possible, for machinery and equipment to reduce SO₂ emissions from engines whenever possible;
- ii) Modify machinery to reduce NO_x emissions;
- iii) All energy consuming and CO₂-generating activities should be done as efficiently as possible to minimize CO₂ emissions;
- iv) Adopt a policy of switching off machinery and equipment when not in use (idle mode);
- v) Appropriate maintenance, engine tuning and servicing of construction equipment to minimize exhaust emissions; and
- vi) Minimize unnecessary journeys or equipment use.

6.1.2 Soil

Construction of access roads, site clearing and grading, excavations and foundations of structures are the main activities that can potentially be responsible for soil degradation. The general impact of the aspects on soil is classified as Minor. However, some mitigation measures can be implemented for reducing impacts on soil such as:

- i) Minimizing areas of excavation and work as possible.
- ii) Where possible, excavated material shall be reused during the construction works onsite as appropriate.
- iii) Stockpiling of soils onsite to be kept to a minimum.
- iv) Best practices for soil management should be followed.
- v) Good housekeeping to minimize spills or leaks.
- vi) Minimize onsite storage of potentially contaminating materials.
- vii) Proper handling and management of wastes.
- viii) Proper handling and storage of potentially contaminating materials (e.g. diesel fuel) and wastes in appropriate secondary containment to avoid accidental release.
- ix) Avoid the use of construction materials containing PCBs or asbestos.
- x) Regular maintenance of vehicles and machinery in equipped and specialized facilities.

6.1.3 Water Resources

6.1.3.1 Ground Water

It is expected that the proposed construction activities will have a Moderate impact on the quality of groundwater resources as previously detailed in Chapter 5. With good construction practices and appropriate mitigation measures, the potential negative impacts can be mitigated. The following measures are recommended to be implemented during construction to prevent any pollution of groundwater:

- i) Control all onsite wastewater streams and ensure appropriate collection, treatment and discharge. Prevent discharge of contaminants and wastewater streams to ground.
- ii) Good housekeeping to prevent leaks and incidental spills.
- iii) Minimize onsite storage of potentially contaminating materials.
- iv) Adequate management and proper handling and storage of construction materials, oils and fuel to avoid spillages.
- v) Wastes properly managed and disposed.
- vi) The implementation of a continuous and regular site inspection system.

6.1.3.2 Surface Water

The proposed construction activities are expected to have a Major impact on the surface water quality. However, applying the proposed mitigation measures will reduce the impact from Major to Moderate. The mitigation measures include but are not limited to:

- i) Avoiding seepage of wastewater, fuel, oil and oily water into the surface water body.
- ii) Transfer of hazardous materials from vehicle tanks to storage in areas with surfaces sufficiently impervious
- iii) In case of fuel or oil storage, place the tank or barrels in a retention basin with a waterproof slab
- iv) Waste disposal to the surface water environment are prohibited.
- v) Treat accidental spills with spill containment and clean up (dispersant) materials.
- vi) Weather conditions will be assessed before work commences each day. Work activities will be suspended during thunderstorms.

6.1.4 Terrestrial Ecology and Biodiversity

It is assumed that the impact of the different construction activities on the terrestrial ecology and biodiversity is expected to be Insignificant in the construction site. However, improper sourcing of locally sourced construction materials such as timber, sand and crushed rocks may have adverse impacts on biodiversity in other sites. The below listed measures shall be followed as necessary during the construction phase(s):

- i) Screen suppliers of locally sourced materials to ensure that their activities are conducted in line with the requirements of ESS6
- ii) Prevent unnecessary clearing or disturbance of native vegetation.
- iii) Vehicle tracks and roads should be used to decrease habitat destruction.
- iv) Minimize areas of excavation and active work sites as far as possible.
- v) All work will be undertaken during the day, as much as practical, to ensure lighting does not impact birds and noise will be reduced as much as reasonably practical to avoid fauna disturbance.
- vi) If protected or sensitive species are discovered or suspected, then work will be stopped, and the EPA will be informed. The principal contractor will seek expert advice and/or consult MOH in order to develop and agree on an appropriate management strategy.
- vii) No litter or plastic bags/containers will fly off the site boundaries.

6.1.5 Human Environment

6.1.5.1 Population

The construction of the new Redemption Hospital will have both positive and negative (Moderate and Minor) impacts on the human environment as detailed in Chapter 5. The present section presents the recommended mitigation measures for the risks and negative impacts.

The potential risks and impacts of the project to the population will be diverse. The potential risks and impacts include (i) non-discrimination and inclusion of vulnerable and disadvantaged groups; (ii) health and safety risks arising from construction activities; (iii) health and safety risks and impacts arising from improper disposal and management of health care wastes during operation, (iv) the risk of Gender-Based Violence and Sexual Exploitation and Abuse, and v) the risk of the exclusion of the concept of universal access in the design of the hospital. Applying the below mitigation measures and measures provided in other project documents developed by the MOH and the Contractor such as the Labor Management Procedures, Gender Action Plan, Contractor's Environmental, Health, and Safety Plan will reduce the project risks and Moderate impacts to Minor and most of the Minor impacts to Insignificant. The following specific measures will be undertaken:

- i) The MOH shall develop, implement, and monitor a GBV action plan;
- ii) The Ministry of Health through the PIU will clearly define the GBV requirements and expectation in the bid documents for construction contractors and all relevant service contracts during project implementation;
- iii) GBV/SEA service providers and referral services mapping exercise shall be carried out; and

- iv) MOH will ensure that the Contractor develop Contractor's Environmental, Health, and Safety Management that includes specific measures to reduce construction impacts on community

Table 4: Residual impacts during construction

Construction Aspect	VR	Impact	Significance – Pre Mitigation	Significance – Post Mitigation
General site grading, construction of access roads , excavations, foundations of structures	Air	Reduction of air quality due to emissions, dust and particulate generation	Moderate	Moderate
	Soil	Degradation of soil quality	Minor	Minor
	Water	Contamination of surface and/or ground water	Major	Moderate
	Terrestrial Ecology and Biodiversity	Loss of terrestrial habitat and flora	Insignificant	Insignificant
	Population	Nuisance to population	Moderate	Moderate
	Traffic	Increase in traffic due to constructions material and equipment delivery	Moderate	Moderate

Physical Cultural Property Chance-finds Procedures

If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:

- Stop the construction activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the National Museum take over;
- Notify the supervisory Personnel who in turn will notify the responsible local authorities and the National Museum immediately (within 24 hours or less);
- Responsible local authorities and the National Museum would oversee protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archeologists of National Museum. The significance and importance of the findings should be assessed

according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;

- Decisions on how to handle the finding shall be taken by the responsible authorities and National Museum. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
- Construction work could resume only after permission is given from the responsible local authorities or National Museum concerning safeguard of the heritage.

6.2 Construction Environmental and Social Commitment and Monitoring Plan

This section presents an overall statement of intent with regard to environmental and social management plans (ESMP) for the proposed project. According to Annex C of the World Bank Operational Policy 4.01, a project's ESMP should consist of the set of mitigation, monitoring, and institutional measures to be taken by the project to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels. The plan should also include the actions needed to implement these measures. In general, ESMP is a delivery mechanism for environmental and social mitigation measures. The overall purpose of the ESMP is to ensure that recommendations provided are translated into practical management actions which can be adequately resourced and integrated into the project phases.

The main objectives of the Construction Environmental and Social Management and Monitoring Plan are to:

- i) Address environmental, cultural and social issues identified and considered to be important;
- ii) Minimize the residual environmental impacts of construction activities;
- iii) Prepare an achievable plan of environmental management for implementation;
- iv) Detail management and monitoring tasks to be completed;
- v) State the timing for implementation of each task;
- vi) Provide details of reporting requirements;
- vii) Identify roles and responsibilities for ensuring that relevant tasks are completed;
- viii) Provide contingency plans that can follow in the event of non-compliance or complaint; and
- ix) Detail protocols, registers and standards reporting forms for documenting complaints, non-compliances, unplanned exceedance and discharges, etc.

The Construction Environmental and Social Management commitments are presented in Table 5. These commitments are meant to manage the residual impacts during the construction phase (Table 4. In addition, Table 6 shows some general management commitments to be followed during the construction phase(s).

Table 5: Construction Environmental and Social Management Commitments

VR	Residual Impact Significance	Construction Management Commitment	Timing/Frequency
1. Soil, Surface- & Groundwater	<i>High and Moderate</i>	<ul style="list-style-type: none"> ➤ Temporary bunds may be considered surrounding the stock piles when storing fine material, wherever practicable, to minimize the loss of fine component and impacts on adjacent soils. ➤ Stage construction such that all earthworks immediately follow clearing and grubbing. ➤ Design a drainage channel along the perimeter of the disturbance boundary to divert runoff around the site. ➤ Sufficient spill response kits will be made available and accessible onsite. Train field staff on the contents and use of spill kits. ➤ Record of soil condition/quality prior to the commencement of the construction activities will be used as a reference for future monitoring activities. 	Pre-construction commencement
		<ul style="list-style-type: none"> ➤ Onsite repair, maintenance, oil change, cleaning, and washing for the plants, equipment, vehicles, concrete truck mixers, etc. is prohibited. ➤ Stock piles will be covered to ensure protection from wind sources. ➤ Minimize the period of time that soil is left exposed without erosion controls (e.g. water spraying) ➤ Movement of vehicles, machinery and equipment will be through designated corridors. ➤ Site specific waste management will be implemented to handle the various types of waste (hazardous and non-hazardous). These waste management plans will focus on material accountability to minimize waste and subsequent deterioration of adjacent soil/surface-and groundwater quality. ➤ Backfill and re-contour all temporary excavations and pits. 	During Construction

		<ul style="list-style-type: none"> ➤ Limit as far as practicable the total area disturbed at all times. ➤ All earthworks will be maintained within a predetermined envelope of disturbance to avoid unnecessary disturbance to vegetation and exposure of soil. 	
		<ul style="list-style-type: none"> ➤ All storage areas should be lined and be inspected for cracks and holes and they will be maintained whenever needed. ➤ Ensure all earthworks and disturbances to landforms are supervised by a qualified person to guarantee compliance to management objectives and procedures of the ESMP. 	Regularly
		<ul style="list-style-type: none"> ➤ In case of spills, immediate clean-up is required. If soils were contaminated then remediation or disposal of the soil will be considered. ➤ All erosion and soil control features will be inspected after each rainfall event. ➤ After any significant spill, soil and groundwater sampling will be conducted in the vicinity of the spill. ➤ For unavoidable onsite repair and maintenance activities and prior to commissioning such activities, adequate mitigation measures will be developed in order to prevent soil and surface- and groundwater contamination. These include for example hard standing, adequate containment, plastic lining, etc. 	As Required
Air Quality	Minor and Moderate	<ul style="list-style-type: none"> ➤ Design vehicle and equipment wash down equipment for installation at the entrance/exit to the construction site. ➤ Locate stockpiles as far away from populated areas as practical. ➤ An induction program in dust management will be provided for all site personnel. 	Pre-construction commencement
		<ul style="list-style-type: none"> ➤ Access to vehicles would be limited to sealed and stabilized areas, as far as practicable, to reduce dust generation. 	

		<ul style="list-style-type: none"> ➤ Regular watering of unsealed/unpaved roads and exposed surfaces and stockpiles will be undertaken by water tankers/carts. ➤ Vehicle loads involving loose materials are to be covered when travelling offsite. ➤ Open burning of wastes will be strictly prohibited. ➤ Areas requiring dust control should be minimized as much as possible. ➤ Dust generation will be monitored and controlled at dust prone areas on an “as needs” basis through the use of water sprays. ➤ Standard construction equipment and vehicles with exhaust pipes for adequate dispersion of pollutants will be deployed. ➤ Chemicals shall be stored in a shaded, cool and well-ventilated area (as per chemical storage requirements). This will help ensure that no fumes or gases are seeping into the surrounding air. ➤ Ensure that all vehicles entering and leaving the site and carrying a load that may generate dust are covered at all times, except during loading and unloading. Any such vehicles shall be covered or enclosed in a manner that will prevent emissions of dust from the vehicle at all times. ➤ Machinery and vehicles will not be running or idle when not in use. ➤ Review weather forecasts and reprogram works during periods of high winds to ensure that dust nuisance is not caused outside the site. ➤ For the operation of the different equipment and machinery, different air pollutants control measures shall be implemented such as, the use of low-sulphur fuels, soot filters, and catalytic emission controls. ➤ Stabilize temporarily disturbed land as soon as practicable. 	Throughout construction
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		<ul style="list-style-type: none"> ➤ Long-term storage of wastes will not be permitted onsite. In addition, for short-term storage, no wastes are to be stored outside designated areas. 	
		<ul style="list-style-type: none"> ➤ Maintenance schedules including engine tuning, filter cleaning, etc. for construction equipment and vehicle will be implemented according to manufacturers' specifications. ➤ The performance of the dust control strategies will be monitored and maintained through visual inspections and continuous monitoring equipment. 	Regularly
		<ul style="list-style-type: none"> ➤ Earthworks will be ceased during high winds in area of visible dust generation. ➤ Where visible dust is being generated, a water cart or hand held water sprays will be used to wet active earthwork areas, stockpiles, gravel roads and loads of soil being transported to reduce windblown dust emissions. ➤ Any complaints relating to air emissions from construction activities will be promptly investigated and, where required, additional controls implemented. ➤ Implement Dust Contingency Plan if unacceptable dust levels arise. 	As required
Population	Minor and Moderate	<ul style="list-style-type: none"> ➤ Maximizing local employment, whenever possible, especially for unskilled labours. ➤ A grievance mechanism will be developed and implemented, if needed. ➤ Awareness training will be undertaken for the workforce on the local values and sensitivities to identify and manage relevant social risks and opportunities. 	Pre-construction commencement
		<ul style="list-style-type: none"> ➤ Security measures will be implemented to prevent unauthorized access. 	Throughout construction

		➤ Warning signs will be placed.	
		➤ Communicating with surrounding community in case of unplanned events such as accidents and prior to conducting any construction activity that might cause disturbance to the local community.	As required
Traffic	Minor and Moderate	<ul style="list-style-type: none"> ➤ Equip all heavy goods vehicles with audible reversing alarms. ➤ Minimize fuel use during transportation by undertaking a fuel use assessment in conjunction with safety assessments. ➤ Time traffic flows to avoid periods of heavy traffic along main roads. ➤ Provide a dedicated parking area for private vehicles of construction personnel. ➤ Design a road system within the new hospital site. ➤ An induction program in traffic management will be provided for all site personnel. 	Pre-construction commencement
		<ul style="list-style-type: none"> ➤ Comply with all statutory vehicle limits such as width, height, axle loading, and gross weight. ➤ Set up and maintain clear signs, flagmen and signals where necessary during heavy machinery movement. ➤ Adhere to speed restrictions within the construction site. ➤ Restrict site traffic to designated internal roadway and suitably graveled areas with the approved construction disturbance boundary. ➤ Ensure heavy vehicles and plant equipment do not leave the site until their use is no longer required to minimize unnecessary transport. ➤ Park all vehicles and equipment not leaving site in designated areas after use. 	Throughout construction

		<ul style="list-style-type: none"> ➤ Traffic to site will be restricted to designated public roads. ➤ Monitor movement of oversize vehicles to and from site and alert community of any planned night time transport of site. 	
		<ul style="list-style-type: none"> ➤ Vehicles will be well maintained. Basic maintenance will be carried out by the driver/operator. Defects found will be repaired before the vehicle is back to service. Periodic servicing of vehicles will be carried out in accordance with the manufacturer's instructions. 	As Required

Table 6: General commitments for the construction of the new Redemption Hospital.

Natural Resources	<ul style="list-style-type: none"> ➤ Required potable water for construction and domestic use at site will be sourced from the approved/licensed water distributors preferably from the local areas. ➤ Water consumption will be optimized by identifying and implementing water conservation and re-use measures, wherever feasible. ➤ Aggregates required for the civil work will be sourced through the authorized subcontractors and quarries with necessary regulatory permits. ➤ Wood, if needed, will be supplemented in a recycled or reused form. ➤ Optimize and reduce the use of electrical sources. ➤ Wherever/whenever possible switch-off electrical appliances. ➤ Optimize and reduce the use and consumption of fossil fuels and diesel. 	Throughout the construction phase(s).
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Noise	<ul style="list-style-type: none"> ➤ Construction schedule and activities will be optimized as practical to minimize the duration of impacts from noise sources. ➤ Noisy works will be scheduled will be carried out during the day hours, as much as practical. ➤ High noise generating equipment will be positioned as far as possible from the working environment. ➤ All project staff to be made aware of noise issues through appropriate training. ➤ Arrange work sites to avoid or minimize truck reversing movements and ensure vehicles enter and exit work sites in a forward direction. 	Pre-construction commencement
	<ul style="list-style-type: none"> ➤ Switch off equipment when not in use. ➤ Idling machinery and equipment to be minimized. ➤ Source noise reduction measures e.g. acoustic enclosures, regular maintenance, etc., will be implemented. Vehicles and equipment used will be fitted with exhaust silencers, as applicable. ➤ Speed limit within the site will be imposed to control the noise from vehicles. 	During construction
	<ul style="list-style-type: none"> ➤ Periodic monitoring will be carried out to ensure noise control and compliance with the standards. ➤ Maintain equipment and machinery as per the manufacturers' instructions. 	Regularly
	<ul style="list-style-type: none"> ➤ Residents in any nearby communities will be notified of any construction activities likely to affect their community. 	

	<ul style="list-style-type: none"> ➤ If elevated noise levels are encountered, the source of noise is to be identified and alternative methods or additional control measures are to be implemented. 	As required
Solid Wastes	<ul style="list-style-type: none"> ➤ Waste management plan to be prepared. ➤ Quantities of construction materials to be accurately estimated to minimize the potential for excess generation of waste. ➤ Construction activities to be appropriately scheduled to minimize the potential for rework. ➤ Sizing of storage areas/skips will be in accordance with the expected waste quantities and the frequency of disposal. Waste skips/containers are to be suitably labeled for easy identification of material. Waste skips will be covered to avoid waste scattering onsite. ➤ Waste bins will be installed clearly marked wherever required. Such places include eating/rest areas, next to operational areas and next to any worker assembly areas. ➤ Adequate waste management, awareness and communication through training, tool box talks and posters placed across the site. ➤ Engage licensed approved subcontractors to undertake all waste and recycling activities. 	Pre-construction commencement
	<ul style="list-style-type: none"> ➤ Separate waste into different categories of recyclable materials as far as practicable. ➤ Potential opportunities for recycle/reuse to be considered for wastes as feasible. ➤ Potential for returning to the suppliers will be explored for wastes such as unused chemicals, empty containers, etc. Reuse options for metal scrap, wood scrap, empty 	

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	<p>containers of non-hazardous materials, packing materials, etc. will also be considered as practical. Non-recyclable waste to be disposed to approved landfills.</p> <ul style="list-style-type: none"> ➤ Order construction materials in bulk rather than small quantities to minimize packaging materials. ➤ Implement purchasing procedures and controls to prevent the accumulation of excess materials. ➤ Non-hazardous wastes suspected to be contaminated with hazardous wastes should be treated as hazardous wastes. ➤ Batteries will be recycled by Third Party or treated at an approved hazardous waste treatment facility or disposed to landfill. ➤ Hazardous wastes, if any, will be stored separately from non-hazardous wastes in accordance with applicable regulations, project-specific requirements, and best waste management practices. ➤ Excavated soil will be stockpiled at appropriate locations. Adequate enclosures and curbs to be provided for such storage, as practicable, to avoid blowing away by wind and run offs. Soil will be reused for backfilling and grading as practical. Any excess soil to be disposed to approved dumpsites. Uncontaminated soil will be re-used as filler or disposed to authorized landfill site. ➤ Proper segregation, storage, transport and waste disposal to a licensed landfill will be conducted by an authorized waste handling contractor. ➤ Compilation of waste data for recording waste movement including: solid and inert waste materials, description of waste types, physical nature of wastes, proposed treatment, dates of movement, transporters, and waste destination details. 	Throughout construction
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	➤ Minimize the use of materials that potentially generate hazardous wastes.	
	➤ Wastes collected at onsite waste bins will be disposed approved locations.	Regularly
	➤ In case of contamination caused by uncontrolled release of chemicals/oil spills, the contaminated soil will be treated at an approved waste treatment facility or disposed to landfill	As required
Wastewater	➤ Septic tanks will be adequately sized and designed based on the expected inflow volume. ➤ Septic tanks will be placed in an adequately contained area (bunded and lined). ➤ Design appropriate containment for oil and soil separation of contaminated wash down water, if any. ➤ Stage construction so liquid waste storage, handling, treatment and disposal facilities are constructed in an early phase to ensure their operation for the majority of works. ➤ Arrange for a licensed contractor to periodically remove wastewater. ➤ An induction program in liquid waste management will be provided for all site personnel.	Pre-construction commencement
	➤ Domestic sewage will be disposed to septic tank and collected via contractor's vacuum tankers. ➤ Onsite vehicle washing will be avoided or a designated vehicle wash area shall be provided onsite with adequate collection, drainage, and disposal of resultant wastewater. ➤ No wastewater discharge to surface water environment will be permitted.	Throughout construction

	<ul style="list-style-type: none"> ➤ All personnel will be trained on the appropriate wastewater management procedures. ➤ Remove temporary septic system in accordance with relevant guidelines at the end of the construction phase 	
	<ul style="list-style-type: none"> ➤ All septic tanks and wastewater storage tanks will be maintained and inspected for any cracks or holes. 	Regularly
Unplanned Events (e.g. accidents, incidents, spillages, leaks, fire, explosions)	<ul style="list-style-type: none"> ➤ Preparation of Emergency Response Plans. ➤ Coordination with emergency responders will be established to deal with the major accidental events. ➤ Train employees to promptly respond in case of emergency events and contain, report and/or clean up any oil or hazardous material spills. 	Pre-construction commencement
	<ul style="list-style-type: none"> ➤ Cause of the incident will be investigated and precautionary measures will be adopted to prevent future occurrence. 	As required
Unidentified Archaeological Sites	<ul style="list-style-type: none"> ➤ Upon discovery of any items of Heritage, fossils, coins, objects of value, antiques or objects of geological or archaeological value discovered at the Work Premises the contractor shall immediately notify MOH as soon as possible of such discovery; and ➤ Appropriate precautionary measures will be taken to prevent employees from misappropriating or damaging any such objects 	As required

6.3 Management Plan/Mitigation Measures during operation

The assessment identified several risks and impacts associated with this project during operation. The main operation phase risks and impacts include: a) Generation, handling, and disposal of health-care waste; b) Occupational Health and Safety (OHS) risks to healthcare workers; and c) the risk of the exclusion of the concept of universal access in the design of the hospital. The following mitigation measures are proposed for the risks and impacts of the operation phase:

a) Generation, handling, and disposal of health-care waste

i) The MOH has developed a Medical Waste Management Plan that will be implemented during the operation phase of this project. The MWMP has provisions on waste minimization, reuse, recycling, proper storage, safe transport, and proper disposal methods.

b) Occupational Health and Safety (OHS) risks to healthcare workers

i) The MOH will develop a comprehensive OHS Plan that covers the major OHS risks and hazards associated with works in hospital environment. The plan should cover hazards such as exposures to infectious and chemical agents; lifting and repetitive tasks; slips, trips, and falls; occupational violence; and risks associated with poor design of the workspace.

c) Risk of exclusion of the concept of universal access in the design of the hospital

i) The MOH will ensure in the design of the facility the concept of universal access which includes unimpeded access for people of all ages and abilities in different situations and under various circumstances. The risk will be mitigated during the procurement of the design contractor and during the design. The MOH will include in the Employer's Specifications universal access requirements to ensure that the facility design incorporates the concept of universal access.

Table 7: Evaluation of potential impacts during the Operation

Project Aspect	VR	Impact	VR Category	Magnitude	Duration	Significance
Staffing	Population	Risk of exclusion from employment	High	-	Long-term	Moderate
Facility Design	Population	Risk of exclusion of the concept of universal access	High	-	Long-term	Moderate
Hospital operation activities	Air Quality	Reduction of air quality due to emissions from	Low	Low	Long-term	Insignificant
	Soil	Degradation of soil quality from health-care waste	Medium	Moderate	Long-term	Moderate
	Water Resources	Pollution of groundwater and surface water resources by health-care waste	High		Minor	Significant
	Terrestrial Ecology and Biodiversity	Loss of terrestrial habitat and flora	Low	Low	-	Insignificant
	Health-care workers and Population	OHS risks to health-care workers and population including exposure toxic chemicals and pathogen	High	High	Long-term	Significant

6.4 Monitoring Requirement

It is the responsibility of MOH to ensure that the quality of the environment within and near the work sites complies with the applicable national regulations and international guidelines, and that periodic environmental monitoring will be carried out during the construction phase. The principal contractor shall demonstrate compliance to document all monitoring data.

Environmental auditing will be also be undertaken by the principal contractor or by a consultant, as prescribed by the EPA, to check and review the effectiveness of the principal contractor's management system.

The proposed monitoring and auditing plan for the construction phase is presented below in Table 7. The exact number of samples and their locations will be determined at the early stage of the construction phase commencement, as applicable. It is highly recommended to utilize the same monitoring locations determined.

Table 8: Monitoring and auditing plans for the construction phase.

Aspect	Parameters to be monitored	Recommended Frequency of Monitoring
Ambient Air Quality	SOx, CO, NOx, Ozone, Total Suspended Particles, PM10, PM2.5, Lead, Ammonia,	Quarterly
Surface Water	pH, temperature, DO, colour, TDS, Salinity, TSS, BOD, COD, Oil & Grease, TPH, Total Coliform and Heavy metals	Quarterly
Noise	Noise levels at appropriate locations	Quarterly, and during high noise activities as appropriate
Waste	Waste generation, storage, recycling, transport and disposal	Monthly waste inventory report to be prepared
Environmental Auditing	Management system, monitoring data, permit condition, and compliance status	Bi-annually and/or as prescribed by the EPA

6.5 Institutional Responsibilities for implementation of the ESMP

To ensure the effective implementation of this Environmental and Social Management Plan, there is need for clear roles, responsibility and reporting procedure by various institutions:

The Ministry of Health, through the Environmental Department and the Project Implementation Unit (PIU) will have the responsibility to ensure that the ESMP and the monitoring plan are implemented. They must ensure that all stakeholders, especially the building contractor(s), are

familiar with the contents of the ESMP and their roles; resources are available and key staff for implementing the activities are adequately trained.

As part of the environmental management, MOH must also ensure that this ESMP is part and parcel of the contract documents for the hospital construction. Specific guidelines which the contractor(s) must observe to minimize or mitigate impacts on the biophysical and social economic environment are provided in the appendix.

Since the impacts are mainly localized and moderate, the implementation of the ESMP and monitoring will be done by the following institutions, as follows:

1. The Environmental Protection Agency (EPA), as the statutory agency responsible for the adherence of environmental soundness during project implementation, will be responsible to review the ESMP and approve same. The EPA will also issue the necessary Environmental Permit for the construction of the new redemption Hospital. The EPA will also ensure that the project monitoring and audit reports are submitted periodically. The EPA has inspectors who will inspect the project for compliance to environmental standards set by the EPA and the Environment Protection and Management Law (EPML) of Liberia.
2. The Ministry of Health (MOH), through the Environmental Department or its Environmental Officer, will lead the implementation of the ESMP. The Environmental Officer will familiarize himself with the contents of the ESMP; ensure the mobilization of resources to ensure that the mitigation measures are implemented. He will be reporting on the implementation of the document.

The Project Implementation Unit (PIU) of MOH will work with the project contractor(s) during the construction phase, to ensure that all measures required for the implementation of the ESMP by the contractors are adhered to. The head or a representative of this unit will also maintain a daily record of the progress being made by the contractor in adhering to the requirements of the ESMP. He will report the progress to the Environmental Officer of MOH.

3. The Contractor will be responsible for ensuring that the construction activities are carried out sustainably through compliance to the project contract with ESMP included. The contractor will also adhere to all regulations and environmental standards for Liberia, as well as the safeguards of the World Bank. The principal contractor will ensure that all sub-contractors adhere to the implementation of the ESMP. The contractor will submit daily/weekly/monthly reports on the implementation of the ESMP to MOH.

6.5 Cost for the Environmental Management and Monitoring

Costs for managing the impacts on the biophysical and socio-economic environment of the project are, in general, included in the project budget. Costs for monitoring the ESMP have also been estimated. The main components of the budget comprise the following:

- i. Training;
- ii. Review of the Environmental & Social Management Plan for Permitting;
- iii. Implementation of Environmental and Social Mitigation Measures;
- iv. Implementation of monitoring plans; and
- v. Environmental and Social Audits.

Training

Training is key to successful implementation of any environmental management program. A budget of about US\$5,000.00 may be required annually to implement the training programs for institutions and persons required to implement the ESMP. This cost will cover transport, preparation of materials and allowance for a certified environmental evaluator to conduct the training exercises.

Review and Permitting

For the nature of project as the construction of the new Redemption Hospital, it is required that a permit from the Environmental Protection Agency (EPA) is mandatory. The process requires that the environmental document for the project is prepared and submitted to the EPA. The document is reviewed by a technical panel, and when deemed adequate for the mitigation of environmental and social impacts associated to the project, an Environmental Permit is issued for the implementation of the project, after the payment of the permit processing fees. A budget of US\$3,500.00 is allocated for the per diem of the environmental evaluator to represent MOH during the review and for the payment of the permit processing fees.

Environmental and Social Mitigation Measures

A lump sum of US\$50,000.00 is provided for implementing mitigation measures for the project during the construction period. This amount will be used for measures such as prevention of soil erosion and contamination to the soil, prevention of pollution to the air quality, personal protective equipment to prevent occupational hazards, and protection of the local water body at the project site.

Implementation of Monitoring Plans

In accordance with conditions set in the ESMP and usually indicated in environmental permits issued by the EPA, there is a need to implement a monitoring program to ensure that measures set to mitigate environmental degradation are adhered to. Monitoring will also include specialist studies in respect of soil, water, air quality, traffic and other impacts to communities near the project area. A budget of \$25,000.00 is suggested for the monitoring program. This amount will also cover transportation cost for the monitoring.

Environmental and Social Audits

There is another requirement proposed in an environmental permit that an annual audit is undertaken and reported to the EPA on the environmental conditions of the project implementation.

It is therefore anticipated that for the two (2) years the project will be undertaken, there will be an annual audit of the project environment and measures to mitigate impacts. A cost of US\$ 10,000.00 is proposed for the audits.

A total budget of US\$93,500.00 is therefore needed for the implementation of the environmental and social mitigation and monitoring plans proposed for the construction of the new Redemption Hospital. The summary is indicated in Table 8.

Table 9: Summary of budget for the implementation of the ESMP

Item	Cost (US\$)
1. Training	5,000.00
2. Environmental Review and Permitting	3,500.00
3. Environmental and Social Mitigation Measures	50,000.00
4.. Implementation of Monitoring	25,000.00
5.. Environmental and Social Audits	10,000.00
Total:	\$93,500.00

7.0 OCCUPATIONAL HEALTH AND SAFETY

The Ministry of Health (MOH) shall encourage the contractor to ensure positive impact of introducing occupational health and safety (OHS) management system during the implementation of the project. This will ensure the reduction of hazards to the environment associated with the hospital construction, as well as risks to workers. This will be in adherence with the National Occupational Health and Safety Guidelines of MOH.

The OHS Guideline has been developed to reflect Government of Liberia values and instruments relevant to the protection of workers' health and safety. The Guidelines also recommends measures for minimizing the risk of work-related diseases and or injuries for workers and the working environment.

Hence, for the construction of the new Redemption Hospital, MOH will ensure that the contractor implements the following OHS measures:

- i) Ensure a healthy and safe workplace through the use of standard operating procedures and orientation of all workers and review those procedures at least quarterly.
- ii) Instruct, inform and supervise workers to protect their health and safety.
- iii) Put in place a workplace health and safety policy and management systems.
- iv) Appoint or employ competent person(s) as occupational health safety supervisor(s) with the consent of the Ministries of Health and Labor.
- v) Assist in a medical emergency by providing any information— including confidential business information—to a qualified medical practitioner who requests the information in order to diagnose or treat any person.
- vi) Help committees and health and safety representatives to carry out their duties.
- vii) Post in the workplace a copy of the Occupational Health and Safety guidelines where workers will be most likely to see it, as well as explanatory material prepared by the Ministry that outlines the rights, responsibilities and duties of workers. This material must be in English.
- viii) Prepare a written occupational health and safety policy, review that policy at least quarterly and set up a program to implement it.

- ix) Post a copy of the occupational health and safety policy in the workplace, where workers will be most likely to see it.
- x) If a person, whether a worker or not, has been critically injured or killed at the workplace, the contractor should immediately notify an inspector, be it health or labor inspectors. This notice should be by direct means, such as by telephone, email, etc. Within 48 hours, the contractor must also notify, in writing, the Ministry of Health, giving the circumstances of the occurrence and any information that may be prescribed.
- xi) If an accident, explosion or fire occurs and a worker is disabled or requires medical attention, the contractor must notify MOH, if any, within four days of the incident. This notice must be in writing and must contain any prescribed information. If required by an inspector, this notice should also be given to the Chief Medical Officer (CMO) of the Ministry of Health.
- xii) Even if no one is hurt, written notice of an accident or unexpected event that could have caused an injury in the workplace is required from the contractor. This notice must be given to the CMO of the Ministry of Health and copy to the Labor Ministry, within two days and must contain any prescribed information.
- xiii) Develop and put in place appropriate frameworks to identify, evaluate and manage risks.
- xiv) Develop appropriate framework for dialoging/consulting with worker representatives.
- xv) Orientate workers on hazards and their mitigation.
- xvi) Require, collect and keep medical records on all workers. This should be established from time of employment and based on results of medical tests carried out by any recognized medical facility, and workers shall not be discriminated against based on their results and disability.
- xvii) Report all job-related accidents and incidents to the Division of Environmental and Occupational Health of the Ministry of Health.

The principal contractor for the new Redemption Hospital construction is to ensure that all workers and sub-contractors on the project adhere to the following:

- i) Observe the universal and workplace safety procedures at all times.

- ii) Receive OHS training and information.
- iii) Work in compliance with the Act, policies, guidelines, plans and regulations of the workplace.
- iv) Adhere to all work-related safety requirements.
- v) Use or wear any equipment, protective devices or clothing required by the contractor.
- vi) Report to the principal contractor or supervisor any known missing or defective equipment or protective device that may be dangerous.
- vii) Report any known workplace hazard to the health and safety supervisor or principal contractor supervisor.
- viii) Report any known contravention of the guideline or regulations to the health and safety supervisor or contractor supervisor.
- ix) Not remove or make ineffective any protective device required by the contractor or by the regulations.
- x) Not use or operate any equipment or work in a way that may endanger any worker.
- xi) Not engage in any prank, contest, feat of strength, unnecessary running or rough and boisterous conduct.
- xii) Submit to medical examinations, as required by the contractor. This is based on the nature of the job; and
- xiii) Ensure workplace participation.

8.0 COMMUNITY HEALTH AND SAFETY

The Community Health and Safety Plan complements the guidance provided in the preceding Environmental and Occupational Health and Safety sections, specifically addressing some aspects of the project activities taking place outside of the traditional project boundaries, but nonetheless related to the project operations, as may be applicable on a project basis.

The scope of the Community Health and Safety Plan addresses MOH's commitment to:

- i) Mitigate potential impacts of Project related activities that may affect the health and safety of communities within the project area and along the transportation route;
- ii) Maintain a healthy workforce and labour pool in the community; and
- iii) Contribute to the improved health and wellbeing of the local community in the project area.

This Plan will be implemented at the beginning of the construction phase. In accordance with the current state of project development, this Plan provides a framework which is conceptual in nature and will be updated as and when necessary.

Some of the significant risks to the community to be considered during the construction of the new Redemption Hospital include:

- i) Possible pressure and/or additional demand on community health services associated with the influx of workers from outside the project area;
- ii) Possible change in community wellness as a result of alcohol and substance abuse associated with the influx of workers from outside the project area;
- iii) Possible Change in Community Health as a result of sudden spread of communicable and non-communicable diseases including sexually transmitted diseases (STDs) associated with the influx of workers from outside the project area;
- iv) Possible pressure on traffic and transportation network associated with construction and operations activities; and
- v) Possible change in water and air quality associated with construction and operations activities.

In addition to the potential negative impacts associated with the project, which would require mitigation, the operation of the new redemption Hospital has the potential to improve community health and safety through the following measures:

- i) Improved access to medical facilities for communities due to new healthcare facilities;
- ii) Improved workforce health awareness; and
- iii) Improved standards of living of direct and indirect employees due to better income in the employees' households.

To counter the risks associated to the community by the project implementation, the following measures will be implemented:

- i) Relative to the spread of communicable diseases due to the influx of new workers to the area, MOH will Awareness campaigns on hygiene and sanitation and how these diseases spread to communities around the project area;
- ii) Relative to non-communicable disease or exposure to materials which may cause non-communicable diseases, MOH and the principal contractor will obtain information on all hazardous materials and means of their control on site and in the vehicles, which will transport them and communicate same to the communities around the project area. MOH and the principal contractor will also make effort to avoid possible community exposure, and if it does occur, staff will be trained to control and mitigate the situation.
- iii) Relative to illness and harm of employees/community members exposed to hazardous wastes through the incorrect disposal of hazardous wastes or badly controlled transportation of wastes to disposal sites, MOH and the principal contractor will institute measures to control the transport and disposal of all waste of and off site. MOH and the principal contractor will also ensure that only registered disposal sites are used and records are maintained of all waste leaving site. MOH and the principal contractor will also ensure the training of staff on matters pertaining to hazardous materials that could be encountered on site and measures to be taken in case of a spill or road accident during waste transportation.
- iv) Relative to the emissions from equipment and vehicles to the communities, MOH and the principal contractor will ensure that haul trucks will be limited to few hours during the day. The principal contractor will also avoid using downward pointing exhausts and will ensure regular maintenance checks of all vehicles and equipment.
- v) Relative to dust from transport, MOH and the principal contractor will ensure speed control limits during the project implementation. MOH and the principal contractor will also ensure haul trucks are not overloaded and are covered where necessary.

- vi) Relative to accident in the community, MOH and the principal contractor will ensure speed control limits. MOH and the principal contractor will also ensure that haul trucks are not overloaded and are covered where necessary. MOH and the principal contractor will also investigate reasons and implement more strict or new measures if need it; and will conduct community awareness and erect signage as designated locations.
- vii) Relative to surface water during flood, impacting the project site or surrounding communities, MOH and the principal contractor will conduct a flood risk assessment and institute measures to curtail the impact.
- viii) Relative to noise level during the construction and its impact on surrounding communities, MOH and the principal contractor will conduct regular monitoring and will limit working hours only during the day. There will also be speed restriction and workers will be issued with the necessary PPE, including ear muffs, where noise level is high.
- ix) Relative to potential economic impact on household livelihood in surrounding communities near the project area, MOH and the principal will ensure that locals are hired for unskilled and skilled work, where possible.
- x) Review and Revision of the Community Health and Safety Plan

This Plan will be reviewed on a quarter basis during the construction of the new redemption Hospital. All necessary revisions will be made to reflect the changing circumstances or operational needs of the project.

Revision of the Community Health and Safety Plan will be the responsibility of Environmental Officer of MOH and the principal contractor. If material changes to operating procedures are required, this Plan may be updated on an “as required” basis and all project staff shall have access to the latest version of this Plan.

9.0 CONCLUSION AND RECOMMENDATIONS

9.1 Conclusion

The construction and operation of the new Redemption Hospital in Caldwell will have both positive and negative impacts. The negative impacts, on overall, are assessed as insignificance to moderate and can be mitigated to low. Hence, this Environmental and Social Management Plan (ESMP) has been prepared to manage the impacts and to reduce those impacts with moderate severity to low. Integration of environmental considerations presented in the ESMP will safeguard the environment of the project during the construction exercises. The ESMP has also proposed a monitoring plan for effective implementation of the mitigation measures herein.

9.2 Requirements and Recommendations

To ensure the effectiveness of this ESMP, the following recommendation and requirements are applicable for the project implementation:

- During construction, the MoH should ensure the implementation of all relevant good international industry practices by the principal, as provided in the World Bank Group's environmental, health, and safety technical (EHS) guidelines.
- The ESMP is adopted and effectively applied;
- The MOH will ensure that funds are available for implementation of the ESMP, especially monitoring to ensure that the principal contractor is abiding by the ESMP;
- The EPA and other responsible institutions will ensure that technical expertise is available for monitoring implementation of the ESMP;
- MOH will include the ESMP in the construction contract;
- The MOH will provide adequate sensitization to the residents of the project area about the project;
- The principal contractor will comply with all relevant legal provisions outlined in this ESMP and the associated contract; and
- The Environmental Officer of MOH will provide regular updates to the EPA through monitoring and audit reports.

APPENDIX

Appendix 1: Photos of Stakeholders during Phase 2 Stakeholder Consultation



Appendix 2: Stakeholders Consultation Attendance

STAKEHOLDER CONSULTATION AND ENGAGEMENT WITH COMMUNITY MEMBERS UPPER CALDWELL				
CONSULTATION WITH COMMUNITY MEMBERS UPPER CALDWELL				
No	Name	Community	Contact Detail	Signature
1	Mr. Garry H. Gibson	Waterside	077327076	<i>Garry Gibson</i>
2	David P. Wilson	Waterside	077637877	<i>David Wilson</i>
3	Rennie K. Koffa	Waterside	080635576	<i>Rennie Koffa</i>
4	Norina E. Kofa	Waterside	077545520	<i>Norina Kofa</i>
5	Maxwell Barber	Waterside	080692028	<i>Maxwell Barber</i>
6	Isabel S. Kamara	Waterside	0770018976	<i>Isabel S. Kamara</i>
7	Grenville S. Smith	Waterside	080655452	<i>Grenville S. Smith</i>
8	Matthew D. Cooper	Waterside	077004902	<i>Matthew D. Cooper</i>
9	Michael S. Siakoh	Waterside	077577877	<i>Michael S. Siakoh</i>
10	Amina Mene Talay	Kukatonor	07750848	<i>Amina Mene Talay</i>
11	Benedict. Leah	Waterside	0776554785	<i>Benedict. Leah</i>
12	Larry D. Yealoh	Kukatonor	0774131408	<i>Larry D. Yealoh</i>
13	Paul Johnson S. Mene Talay	Kukatonor	077555895	<i>Paul Johnson S. Mene Talay</i>
14	Shandayati Fendi	Waterside	077732367	<i>Shandayati Fendi</i>
15	Maria Mambah	Waterside	077762333	<i>Maria Mambah</i>

17			
18	Majandra Benji	Water Side	0770931408 S. J. J.
19	Tumak Lutter	Water Side	0770931408 J. C.
20	Lust Bedi	Water Side	0770931408 L. B.
21	Ludger Lorenzen	Water Side	0770931408 J. Lorenzen
22	Fatimata Kama	Water Side	F. K.
23	Satto B. Jallah	Water Side	0770112321 S. Jallah
24	Retty Hindeh	Water Side	0770112321 R. Hindeh
25	Maria William	Water Side	— M. W.
26	Fabella Messel	Water Side	0770931408 —
27	Angelina Tachon	Water Side	— —
28	Vicki Johnson	Water Side	0770899239 U. St. Johnson
29	Grace Marshall	Water Side	0770123077 G. M.
30	Satto Johnson	Water Side	0770161251
31	Haua Siatch	Water Side	0770778492
32	Deconker B. J. J.	Water Side	0770541279
33	Jackie Koller	Water Side	0770678851

CONSULTATION MEETING MINUTES WITH COMMUNITY UPPER CALDWELL

No	Name	Community	Contact Detail	Signature
1	Abraham E. Seb	Waterside	077091016	
2	David D. Dafuoh	" "	0777211139	
3	Abraham Sanni	" "	0770191109	
4	Albertina B. Cooper	" "	0770303466	
5	Martha S. D. Gbar			
6	Com Fort E. Binnah	" "	0886514002	
7	Patience Carthy	Waterside	077040789	
8	Chika G. Gbure	Waterside	077449801	
9	John F. Kneke	" "	0886412522	
10	Chika Nyanteh	" "	077679908	
11	Beatrice T. Garpue	" "	0776140675	
12	Nykar. H. Fize	" "	0886942034	
13	Ezekiel T.	Waterside	077 0777863315	
14	Daniel Forkumye	" "	0770683423	0880226522
15	Samuel K. OBIKWE	Waterside	0776298950	felix
16	Joy E. OBIKWE	✓	0776298950	felix

17				
18	Mariane Serri	Water Side	0770931425	S. Serri
19	Junah Cooper	Water Side	0775978979	J. C.
20	Janet Boudo	Water Side	0775525771	L. B.
21	Ludger Janyanach	Water Side	0775135186	L. Janyanach
22	Fatunmade Karamo	Water Side		F. K.
23	Satto B. Jallah	Water Side	0770112321	S. Jallah
24	Betty Hineh	Water Side	0555107979	B. Hineh
25	Mamie William	Water Side	—	M. W.
26	Pekela Moses	Water Side	0880908060	—
27	Angelina Jackson	Water Side	✓	—
28	Victor Johnson	Water Side	0775897239	V. Johnson
29	Grace Marshall	Water Side	0770123079	G. M.
30	Satto Johnson	Water Side	0776161250	
31	Hanna Siatoh	Water Side	0775778482	
32	Deconne B. Sillah	Water Side	0775462779	
33	Jackie Kellen	Water Side	0886788546	

Appendix 3: Minutes of Stakeholder Consultation in Upper Caldwell Community

MOH		STAKEHOLDER CONSULTATION and ENGAGEMENT WITH COMMUNITY LEADERS UPPER CALDWELL	
CONSULTATION MEETING MINUTES WITH COMMUNITY UPPER CALDWELL			
Stakeholder Visited:		Community (New Redemption Hospital Project) Upper Caldwell	
Date: Feb 16, 2020			
Time (Start – End) 4:00PM -5:00PM			
Attendees: 86 PAPs			
Name/Position		Issue Discussed	Response
1	Mr. Mathias D. Cooper, Chairman Water side community	Welcome remark and initiate the discussion of the meeting. Preliminary introduction to the community. Provide briefly the overall objective of the meeting and give the floor the Environmental Specialist.	PIU team which include: 1.Deputy project manager Harry Neufville, 2. Menitoyan J. Dolo, Environmental and Social Safeguard Officer of the PIU, 3.Miss Margaret Smith Gender Focus person of the Family Health Division of MOH accompanied by two drivers of the PIU

2	<p>Mr. Menitoyan J. Dolo Environmental and Social Safeguard Officer</p> <p>Mr. Harry Neufville</p>		Overwhelming welcome from the participants with a huge applaud
3	<p>Mr. Harry Neufville, Deputy Project Manager</p> <p>Menitoyan J. Dolo</p>	Discuss with the participant of the role the PIU play in the health system. Explain the requirement of the Bank and their policy in terms of elevating poverty. Explain to the people about the new project. Building facility for internal medicine for the benefit of everyone in the community. Explain to them on the generation and disposal of waste from the newly constructed hospital. The facility will be open to all citizen but in particular the catchment population.	Each participant introduced themselves with their names, place of work and position in the community.
4	<p>Mr. George Gibson, Council man for the 3 community</p>	Tell us crystal clear term, you made mention of the waste which I want to believe will be harmful, how will you manage that waste	Every waste generated from a hospital must be handle with exceptional care. This hospital will have one of the best waste management system ever in Liberia. Those mechanism that allow us to properly handle our waste will be put in place. Such mechanism include early segregation of waste, coding of waste generated, handling of the waste transport, and appropriately disposing of these waste according to their nature. Be it pathogenic,

			general waste, biological waste and so on.
5.	Cyrinus S. Smith	My concern is about the contractor not making provision for job for the local people of the community.	(Harry Neufville) mentioned to him that the decision was not binding on the contractor that workers should come from the community to be employed. Maybe in the next contract we could push it forward that the contractor prioritized local employment especially when the local are qualified
6.	Mr. Jim Samson resident of the community	I heard you talking about incineration, burning of waste and so on. What will happen to the latrine, how is it going to be handled. My second concern have to do with, building a health facility in a popular community, we do not see the community so attach and involve with the project and how the latrine is going to be contain. The Last question have to do with the incinerator you going to build, is it not going to be affecting us from the smoke form the air?	In respond to that Mr. Dolo explain to him that building a hospital like this nature has a very unique latrine system. There is going to be NO leakage of feces into ground water that may further cause pollution. With the issues of incineration, we are going to bring in a modern incinerator that will have no smoke being release into the atmosphere. And after incineration the remnant will be very minimum, and we will dispose of that mater into a designated Ash PITs. Its 100% environmentally friendly
7	Mr. Samson	How are you going to handle the running of hospital from the massive community dwellers in terms of crossing roads and thing? Secondly this is our community, the hospital coming to live with us, what is the social benefit for us to benefit?	Mr. Dolo told him the hospital will be fenced for the community. The road will have access to pedestrian. Road sign will be posted indicating that this is a hospital zone. Speed breakers will be built on the road to

			control excessive speed to avoid any kind of incident of such nature. Harry Neufville mentioned to him that social benefit will include provision of health care for all, some level of employment of scale and unscaled labor.
8.	Norina B. Kofa nurse and Supervisor at SGBV unit Redemption hospital	Glad to meet you all. Will there be special section that will be exclusively for SGBV? There is Challenge for space when come to SGBV. I also want to know how many beds room that will be available for woman and children section? We want to know how the availability of space in terms of number is of ward for the general public.	Harry Neufville, for the space, I do understand the situation of the current Redemption that's why we are building new hospital. For this one we should have at least 97 beds only for maternity and pediatric wards. We have to analyze the load from the current hospital when come to different services, if SGBV is part of the services provided there is going to be space for that. We do have a channel to report GBV and GRM
9	Larry Wilson Residence of the waterside community	I learn that the first phase of the project is maternal hospital, any child hospital should have a playground to help in the recovery process of the children. Will this hospital consider such?	Harry Neufville, the design of the hospital will consider a pediatric ward and have space and play room for children. But to have play ground in the yard. Is no.
10	Rev. Menepalay Johnson, Chair for the Kukatonor community	We have three noted community, River view, Kukatonor and waterside community. We are the immediate community members. Just in case of employment please consider these community	Well noted. Harry Neufville
11	Mr. David Darfor	Concern have been that at the beginning of the current project there were few street lights that provided some visibility at night, after some	Harry explain the process of the GRM as a means to address problem. He noted that we have a establish GRM

		time it went off. Now we are in total darkness.	committee at the level of the project that address every concern from PAPs. (Mr. Dolo) Street lights are not surely the responsibility of the contractor. When the hospital is completed, the government might provide LEC as additional backup which the community might benefit from if that happens
12	Mr. George Gibson, Council man for the 3 community	We want to have you liable for the establishment of the GRM you are talking about because we thank that will help us in the process. We need a contact number to for ease of channel to communicate	Mr. Dolo Consider it done as soon as possible
13	Ma Nancy Doe, Women lead, Waterside community	I want to talk about the water. I came here 1993. I want for the government to close the sand mining place because the big big truck and the continue undermining of the river might cause problem for us in time to come.	We are considering that, but we need to contact the appropriate authority to address the issue of the water especially the road will be use as hospital zone. And for safety purposes, we might not want to see these vehicles using this root for safety reason.
14	Mr. Jim Samson resident of the community	Appear that we need street light. Help us to talk to NDS to provide us with street light for the community	Harry Neufville, we will address that at the time appropriate time
15	Michael Junes	The current project is right here people that capable of during a job when you send letter there, they will trash it and never care to call you for even interview.	That's the reason we said from the beginning we did not made it binding on the side of the contractor for the contract we sign. Now we might negotiate all of these for the next contract so that some qualifies youth from the community can possibly be a part of the

			construction process (Mr. Dolo)
16	Francis A. Varney Youth Chair for Caldwell community	Project workers taken from far away not prioritizing local. Secondly you cannot have a multi million dollars construction company and the people cannot have portable drinking water.	When the contractor get the contract it depend what is in the contract. If we tell them you need to provide water the next thing they will charge the government. But we can have a good relationship with the contractor through engagement. In term of water coming here is the government responsibility. There is no way the project can do that. Let me tell you the truth, is not a right for the contractor to hire x number of community if they community people are not qualified. (Harry Neufville)
17	Mrs. Norina B. Kofa Nurse and Gender focus person at Redemption Hospital	The current redemption hospital is a serious challenge. We are asking you to supply water at this hospital that is to be constructed and the public work might bring in water so that the community can benefit from it	Yes, we will definite have a portable water supply at the facility. However, if Public Work Ministry through Liberia Water and Seward can provide, then fine we can assure you the community will benefit from that.
18	Mr. Mathias D. Cooper, Chairman Water side community	Okay, now that we have exhausted most of our concerns, we cannot do it all today that why we are asking for another meeting of this nature, we will now give the floor to Mr. Dolo and team to conclude for us to depart	Harry Neufville- thanks the participant for the overwhelming attendance and promise relation with the community and asked the Safeguard officer to immediately introduce the GRM for ease of communication and resolving grievances if any.

			Mr. Dolo re-assure the community that we will ensure the smooth operation of the GRM and conduct regular meetings and established a switch communication line that will be used for all grievances to be channel. We however ensure a second meeting which we will be able to respond to GBV activities actively.

Appendix 4: Gender Based Violence Risks Assessment

Gender Based Violence-The Context

Gender-based violence (GBV), including Sexual Exploitation and Abuse (SEA), is a prevalent global challenge and manifestations likely exist in every environment. Violence against women and children and sometimes even against men, contributes to enduring physical and mental harm, while undercutting the ability of survivors, and often their families, to engage in meaningful, productive lives. Finding solutions to reduce and respond to GBV is a critical development imperative, with implications for the productivity, agency and well-being of individuals and communities.

The Liberia Demographic and Health Survey demonstrated that there is a high rate of early marriage, with 38% of women aged 20–24 having been married before the age 18; and 40% of women aged 15–19 having been married before the age of 14. According to the Liberia Demographic and Health Survey 2013, the median age of first sexual intercourse is 16.2 for girls in Liberia and 18.2 for boys. Some 31% of women aged 15–19 have begun childbearing, and by age 18 this rises to 52%.⁷ Educational level and economic status impacts both early sexual debut and the age of a mother at first birth. Early pregnancy can have lasting negative effects in terms of SRHRs for young women. Early childbearing increases risk for both the adolescent mother and her child, with a higher likelihood of maternal death, life threatening sexual and reproductive health (SRH) consequences, and HIV infection. SRHR education is not consistent in schools, and other factors related to availability of and limited access to health services contribute to poor SRH indicators in Liberia.

Liberia has seen high incidences of Gender-Based violence, including Sexual Gender based violence (SGBV) which continues to draw attention. For instance, as of the periods: January-September 2017, a total of 892 GBV cases were reported; of which 506 were rape cases. In 2016 alone, a total of 1,413 Gender-Based Violence (GBV) cases were reported; among which 778 were rape cases. January–December 2015, recorded a total of 1,555, and 720 were rape cases. Rape proves to be the commonplace case of GBV in Liberia. A study conducted for the World Health Organization (WHO) in ten counties in Liberia found that an average of 77.4 per cent of women and girls had experienced rape during or following the civil war.

Montserrado County where Construction of Phase 2 of Redemption Hospital will be carried out accounts for 61% of all reported cases, 88% of survivors/victims being below 18 and 13% younger than 10. Cases of GBV recorded by MGCSP in 2014 include 682 rape cases (49%); 407 physical assaults and domestic violence (29%) and 40 persistent non-support (2.9%).¹

Legal and Policy framework affecting Women's right and GBV

International instruments

The international legal and policy framework establishes standards for action by countries to meet their legal obligations and policy commitments to address violence against women. Some of the key International instruments for the protection of women include the following:

- United Nations General Assembly, Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW): Date of adoption: 18 December 1979.
- Fourth World Conference on Women, Beijing Declaration and Platform for Action Date of adoption: 15 September 1995.

¹ SGBV Joint Program Document, Human Development Index (2017 Report), LISGIS 2013--DHS

- United Nations General Assembly, Resolution 52/86 on Crime Prevention and Criminal Justice Measures to Eliminate Violence Against Women Date of adoption: 2 February 1998.

National Instruments

Liberia is ranked 176 of 189 counties and territories on the Human Development Index, with a value of 0.465 in 2018. According to Gender Inequality Index, Liberia ranks 155 of 168 in 2018. The current status of gender inequality and gender development in Liberia exposes the grave need to mainstream gender sensitivity and gender-responsive policy developments at all levels. Existing gender inequalities in Liberia create conditions of unequal access to the resources between men and women and manifests into violence. Custom practices such as male pre-eminence, practice of dowry, female circumcision and acts of direct violence (rape, wife-beating, etc.) are manifestations of deep-seated gender inequalities across the Liberian society. Most common of these is rape.

Some of the key policies and laws pertaining to gender-based violence in Liberia include the following:

- Gender and Development Act; Dated 2001- Established the MOGCSP to promote and strengthen gender equality, women's advancement, and children's welfare
- Rape Law (An Act to amend the New Penal Code Chapter 14 Section 70 and 14.71 and to Provide for Gang Rape". Dated 2004
- Act of 2008 amending Title 17 of the Judiciary Law 1972. Dated 2008. Establishes Criminal Court "E" with exclusive original jurisdiction over sexual offences on Montserrado. Creates of Sexual Crimes Division within the Circuit courts of the remaining 14 counties.
- National Gender Policy 2009.- Aims to eliminate the marginalization of women and girls by 2020.
 - Seeks to: promote gender-equitable socioeconomic development; enhance women's and girls' empowerment; increase gender mainstreaming in national development; and create strengthen structure, processes and mechanisms in which women participate equally and that ensure that women and men can equally access, control, and benefit from the country's resources.
 - Section 4.1.9 focuses on sexual and reproductive health, adolescents' right sand elimination of harmful traditional practices and gender equalities including supplying free health and clinical services for rape survivors
 - Section 4.1.6 focuses on human rights and GBV and calls for welfare programs to rehabilitate/reintegrate GBV survivors, establishment of shelters and provision on psychosocial support facilities, and regular conduct of GBV situation assessment. It also calls for strengthening legislations to respond to GBV including rape, sexual exploitation and abuse, domestic violence, early and forced marriage and human trafficking as well as the enhancement of capacity in law enforcement and health care providers to effectively respond to GBV cases
 - Section 4.1.10 also focuses on responding to GBV that occurred during the conflict through promoting rehabilitation to address psychosocial impacts.

To prevent and manage Gender-Based Violence, the government of Liberia has developed a National Action Plan to address GBV issues in a systematic, complementary and comprehensive manner through a multi-sectoral and multidimensional approach and to respond through holistic care and services to survivors of GBV. The NAP addresses different pillars with key potential partners. Below are the pillars and partners:

Table 1: GBV pillars and their partners

Pillar (s)	Lead Agency (ies)	Partners working on Pillars
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Psychosocial and Coordination Pillar	Ministry of Gender Children and Social Protection	<u>Psychosocial</u> THINK, ARC, MSF-B, WIPNET, UN Women, UNFPA, UNICEF, WHO, UNHCR, SCF (UK), OXFAM, CF, Medica Liberia, Christian Empowerment and Sustainable Programme (CESP), Mother Pattern College of Health Sciences / Women Health and Development Programme, Borough Women & Girls Empowerment Programme, Women Aid Inc, NRC, International Rescue Committee (IRC), EQUIP, WHDP/MPCHS, ACTIONAID
		<u>Coordination</u> MOJ, MOH, MOE, NRC, GBV Taskforce from all counties, LNP, UNICEF, UNDP, UNHCR, UNFPA, UN Women
Legal and Protection	Ministry of Justice	MOJ, MOH, MOE, NRC, GBV Taskforce from all counties, LNP, UNICEF, UNDP, UNHCR, UNFPA, UN Women, Medica Liberia
HEALTH PILLAR	Ministry of Health	International Rescue Committee (IRC); National Association on Traditional Practices Affecting the Health of Women & Children (NATPAH) Inc, Women Health and Development (WHD); Merlin, THINK, MSF-B, Liberian National Red Cross Society (LNRCS); SCF, American Refugee Committee (ARC); UNFPA; Medica Mondale Liberia; Ministry of Education; Merlin-Liberia, UNICEF

Process followed by Risks Assessment

The Process

- Desk review of national laws, policies, strategies and Plan, WB guidelines, global and national policy environment.

- Stakeholder consultations carried out in February 2020, at Upper Caldwell electoral district Eleven (11) for the purpose of stakeholders' engagement to establish the perception of the community on the upcoming construction of the Redemption phase 2 and to assess potential GBV risks.
- Preparation of the GBV assessment report which includes identifying potential risks; identifying vulnerable at-risk group; an assessment of GBV response capacity; multi-sector response initiative and writing of report.

Stakeholder Consultations

The PIU team headed by the Environmental and Social Safeguard officer and Gender Focal Person of the MoH carried out group discussion with community women, youth (including adolescent boys & girls), elderly, Religious leader and community leadership. There were no consultations with contractors as they have not been mobilized yet in the project. These interactions led to the identified of potential At-Risk groups for GBV in the project as outlined below:

Key Findings

Vulnerable groups

Women and children (particularly adolescent girls)

In the context of this project, women and children (particularly adolescent girls) living in adjoining communities are a potential vulnerable group for GBV and SEA. During the consultation, youth and men expressed concern of jealousy that labor influx in the existing construction has been generating interaction with their daughters, sisters and wives and they fear that similar construction will generate same. They viewed the economic empowerment of local migrant laborers as a threat to their families. Youths expressed that they were not given any opportunity of employment even though they were skilled to perform the same task local migrant workers were hired to do.

Female workers at construction site

In the context of this project, female workers at construction are also vulnerable to sexual harassment and sexual exploitation and abuse if adequate safety and security measures are not undertaken at work sites. Suitable work conditions for women's participation includes gender-equal wage rates, safety & security issues, childcare facilities, health and sanitary requirements and separate toilets for women.

GBV risks associated with the project site and local communities

- The Redemption Hospital Phase II will be constructed in the Township of Caldwell, which is a part of the St. Paul River District of Montserrado County. According to the 2008 Census of Liberia, the St. Paul River District has a total population of 71,831. Of this number, 34,981 are males and 36,850 are females. Adjacent the St. Paul District is Greater Monrovia, which has a total population of 970,824 – 476,473 males and 494,351 females. Similar to the Phase I, Phase II is expected to serve residents of both the St. Paul River and Greater Monrovia Districts.
- The Township of Caldwell is rapidly developing into an urban community. Majority of the residents have employment in the City of Monrovia and commute there daily. The economy of Caldwell is based on river sand mining, commerce and industry, and labor and employment. The township also has lodging houses, markets, government offices and non-governmental organizations offices. The construction and operation activities of the project will have a significant impact on the economic activities in the township because the project is likely to require many unskilled laborers who can be hired from the township. The construction activities are also expected to require many cubic

meters of sand. Sand mining along the St. Paul River is a major activity in the area. Cost of living is reported to be very high in the area.

- There is access to public and private schools at the primary and secondary levels near the project area. However, most of the schools, as in many parts of the country, lack many basic facilities including library and laboratory.

Given that Montserrado has high prevalence of gender-based violence and the project site and adjoining communities have more woman than man, in coming workers which are dominantly young males can have social contact with female members of the local communities. This social contact can lead to unacceptable and/or illicit behavior such as Sexual Harassment (SH) and Sexual Exploitation and Abuse (SEA). Also, cost of living is reportedly high, labor influx can potentially triggered increase in demand for goods and services which may lead to price hikes.

Assessment of GBV response capacity

The assessment has mapped the following GBV service providers and the nature of the services provide in the table below:

Table 2: GBV service providers and nature of the service

Name of service provider (s)	Categories	Nature of service (s)
<ul style="list-style-type: none"> ▪ One-stop Centers ▪ Healthcare providers ▪ Healthcare professionals 	Health	<ul style="list-style-type: none"> ▪ Medical examination and management ▪ Protection ▪ Law Enforcement ▪ Legal ▪ Short Stay accommodation for survivors that are brought at night or on holidays
<ul style="list-style-type: none"> ▪ Safe homes 	Protection	<ul style="list-style-type: none"> ▪ Psychosocial counseling ▪ Rehabilitation ▪ Economic empowerment
<ul style="list-style-type: none"> ▪ Women and Children Protection (WACPS) ▪ Prosecution team of the SGBV unit at MOJ ▪ Courts and magistrates 	Legal and Protection	<ul style="list-style-type: none"> ▪ Prosecute SGBV related crimes ▪ To provide victim-centered approach to Sexual violence cases and Assist victims in dealing with the criminal justice system. ▪ Coordinate with police, health professional and psycho -social counselors to help in alleviating or minimizing trauma to victim ▪ Public awareness on SGBV

Multi-sectoral response initiative

For leadership and governance on GBV issues, the Ministry of Health (MoH) spearheads the Psychosocial Pillar; the Ministry of Justice (MOJ) spearheads the Legal and Protection Pillar; and the Ministry of Gender, Children and Social Protection (MGCSP) spearheads the Coordination Pillar. However, these pillar leads are jointly supported by a GBV Technical Committee and supervised by a GBV Steering Committee—comprising of local and international partners.

Recognizing the prevalence of sexual and gender-based violence (SGBV) and its devastating impact on women and children in particular, as well as families and communities. ONE-STOP CENTERS have been established as joint action to respond to the needs of the survivors and provide services that ease the pain of trauma they experience when they have been violated and helps them to cope and recover in the quickest possible time. One-Stop Centers provide the following services: Medical Examination & Treatment (including HIV testing), Psychosocial counseling (The survivor is not the only person that receives counseling. Her/his family members also receive), Protection (This protection is provided at a safe home), Law enforcement (The WACPS Police officer assigned to the one stop center gather their statement from the Nurse Examiner first, the Psychosocial Counselor, and then the survivor). Legal (The legal counselor/Prosecutor at the one stop center provides all necessary information to the survivor on legal aspects of the case and counsels him/her to register the case in the court) and Short Stay accommodation for survivors that are brought at night or on holidays. The project has mapped ONE STOP CENTERS that directly serve the project-affected communities and is presented in the table below:

Table: 3: One-Stop Centers serving project-affected communities

One Stop Centers	Location
James N. Davis Jr. Memorial Hospital	Neezoe community
Redemption Hospital	New Kru Town
Star of the Sea	West Point Community
Du port Road	Du-Port Road
Hope for Women	A. B Tolbert Road

Challenges faced by One-Stop Centers

One- Stop Centers have an important function in the multi-sector response initiative to services for survivors of GBV. Unfortunately, these centers lack adequate supplies and staff morale and commitment are low. Also, health personnel lack adequate training and the means to attend to survivors of SGBV.

Project specific risks

Project site workers and labor influx

The IFISH project shall contract a company/firm to construct the phase II of the Redemption Hospital. The categories of project workers are direct workers, contract workers, and community workers. Phase II of the Redemption Hospital is expected to have 150-200 contracted workers. Three percent (3%) of the contracted workers will be migrant workers. This influx of workers into the local communities may potentially increase goods and services, which can lead to price hikes, increase the rate of sexual harassment and sexual exploitation and abuse. Caldwell township is a peri-urban setting. It is less difficult to find qualify local workers, which reduces the project need for large influx of incoming workers from other areas. There is access to public and private schools at the primary and secondary levels near the project area. The economy of Caldwell is based on river sand mining, commerce and industry, and labor and employment. Of these, the project site is closely adjacent the river sand mining activities and primary and secondary schools. Influx of labor, if not carefully managed on the local front and migrant workers flow can negatively impact the project area, especially in the context with high prevalence and social acceptability of violence against women and girls. It is therefore imperative to plan mitigation measures to address these risks.

For example,

- Construction workers are predominantly younger males. Those who are away from home on the construction job are typically separated from their family and their normal sphere of social control. This can result in inappropriate behavior, such as sexual harassment of women and girls and illicit sexual relations with minors from the local community.
- Projects with a large influx of workers may increase the demand for sex work - even increase the risk for trafficking of women for the purposes of sex work - or the risk of forced early marriage in a community where marriage to an employed man is seen as the best livelihood strategy for an adolescent girl. Furthermore, higher wages for workers in a community can lead to an increase in transactional sex. The risk of incidents of sex between laborers and minors, even when it is not transactional, can also increase.
- Women and girls' job opportunities are limited due to a lack of appropriate transportation options. When creating job opportunities for women within projects, teams should be aware that traveling to and from work in some settings can force women and girls to use unsafe, poorly lit commuter routes, or unsafe public transport. Increased risk of violence is experienced when women are confronted with traveling long distances to access work opportunities or forced to travel at night.
- Increased interactions between the incoming workforce and the local community may result in increasing rates of communicable diseases, including sexually transmitted diseases and HIV/AIDS.
- Projects create changes in the communities in which they operate and can cause shifts in power dynamics between community members and within households. Male jealousy, a key driver of GBV, can be triggered by labor influx on a project when workers are believed to be interacting with community women. Hence, abusive behavior can occur not only between project-related staff and those living in and around the project site, but also within the homes of those affected by the project.

Conclusion

Considering these GBV risks, there are different “areas of impact” that influence both the nature of the risk, and the appropriate mitigation measures that a project can implement. The estimated number of project workers anticipated may be 80-90% male of which 60% may be dominantly young males (The project does not emphasize gender mainstreaming on construction). These males may have social contact in communities with high women population and high living standard. The project adjoining communities is generally the broader geographic area around the project. This extends beyond the specific location where construction is being carried out. Adjoining communities are at risk of GBV particularly given that workers may be highly mobile. These GBV risks need to be assessed throughout the project’s life by monitoring the situation, assessing the effectiveness of risk mitigation measures, and adapting them accordingly.