



RWANDA BIOMEDICAL CENTER

**RWANDA HEALTH EMERGENCY PREPAREDNESS, RESPONSE AND
RESILIENCE PROJECT (HEPRR) USING THE MULTIPHASE PROGRAMMATIC
APPROACH (PHASE 4)**

Project Number: P504764

**ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK
(ESMF)**

Final Report.

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Abbreviations and Acronyms

CERC	Contingency Emergency Response Component
EOC	Emergency Operations Center
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and social framework
ESHS	Environmental, Social, Health and Safety
E&S	Environmental and Social
ESMF	Environmental and social management framework
ESMP	Environmental and Social Management Plan
ESIA	Environmental and Social Impact Assessment
ESSs	Environmental and Social Standards
FGDs	Focused Group Discussions
GRM	Grievance Redress Mechanism
GBV	Gender Based Violence
GGCRS	Green Growth and Climate Resilience Strategy
GMP	Good Manufacturing Practices
GoR	The Government of Rwanda
GRMs	Grievance and Redress Mechanisms
HEPA	High efficiency particulate air
PHE	Public health emergencies
ESMF	Environmental and social management framework
MCH	Maternal Child Health

MNCH	Maternal, Newborn, Child Health
NCDs	Non-Communicable Diseases
NST-2	National Strategy for Transformation, phase 2
NTAC	National Technical Advisory Committee
OHS	Occupational Health and Safety
OIE	World Organization for Animal Health
PAD	Project Appraisal Document
PDO	Project Development Objective
PMU	Project Management Unit
PHE	Public health emergencies
RAB	Rwanda Agriculture and Animal Resources Development Board
RAP	Resettlement Action Plan
RDB	Rwanda Development Board
REMA	Rwanda Environmental Management Authority
RMS	Rwanda Medical Supply
Rwanda FDA	Rwanda Food and Drugs Authority
RSB	Rwanda Standards Board
RURA	Rwanda Utilities Regulatory Authority
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment

SPIU	Single Project Implementation Unit
VAC	Violence Against Children
WB	World Bank
WHO	World Health Organization
WMP	Waste Management Plan

EXECUTIVE SUMMARY

Introduction

The Republic of Rwanda, represented by the Ministry of Finance and Economic Planning (MINECOFIN) and the World Bank signed a Financing Agreement (FA) for the International Development Association (IDA) Credit of US\$120 million for the “Rwanda Health Emergency Preparedness, Response and Resilience Project Using the Multiphase Programmatic Approach”. Rwanda Biomedical Center (RBC) will be the implementing agency. The objective of the project is to strengthen health system resilience and multisectoral preparedness and response to health emergencies in the Republic of Rwanda.

Project description

The RHEPRR Project has 4 components: *the first component is "Strengthening the Preparedness and Resilience of Regional and National Health Systems to Manage Health Emergencies"* that will be entail to strengthening cross-border response including the expansion of the cross-border functional surveillance systems at points of entry (Rwanda’s 19 health border facilities) and the expansion of the National Health Institute into the Diagnostics Development and Research Center, including the construction of Biosafety Level 3 laboratory using energy efficient and climate adaptive building design as well as local materials. *Second component is "Improving Early Detection of and Response to HEs through a Multi-sectoral approach"* that will support operational readiness and capacities across critical subsystems to effectively detect and respond to national, regional, and global health emergencies throughout infrastructure development activities such as rehabilitation, renovation, and upgraded especially health centers in remote areas with hardship to access district hospitals. Well-equipped ambulances third component of project will be the third one is *"Project Management"* that will ensure efficient and effective management and implementation of the Project by the Rwanda Biomedical Center (RBC)

The last component is *"Contingent Emergency Response Component (CERC)"*. This component will facilitate access to rapid financing by allowing for the reallocation of uncommitted Project funds in the event of a natural disaster in a country, either by a formal declaration of a national emergency or upon a formal request from the government.

Policy legal and regulatory Framework

Laws and regulations pertinent to this project all aim at avoiding adverse effects to the community and the environment by protecting workers and the community from infectious

substances and health care facilities, discrimination, etc. The international guidelines mainly focus on good practices to contain highly infectious substances especially in the BSL3 laboratory and biobank and give emphasize on infection control and waste management according to the WB as well as the WHO guidelines.

Key policies, laws, regulations, standards and guidelines relevant to the HEPRR project are:

- National policies and regulations on the environment, chemical and hazardous wastes, biosafety, Rwanda labor law, gender policy etc.
- World Bank Environmental and Social Standards (ESSs)
- The World Bank EHS Guidelines on Waste Management Facilities, and Pharmaceuticals & Biotechnology Manufacturing.
- WHO Guidelines on Pharmaceutical Products, good Regulatory Practices, transport of Infectious Substances, Laboratory Biosafety Manual (2020), biosafety Guidelines, Transport Guidance (2023–2024)

Baseline information on proposed project location

This chapter outlines the environmental and social parameters that need to be collected during the development of Environmental and Social Impact Assessment or Environmental and Social Management Plan for a particular subproject depending on screening findings

Potential environment and social risks and impacts

The potential environmental and social risks and impacts that may result from project activities have been anticipated from different activities of the project and are repartitioned in all phases of the project. Environmental and social risks and impacts to be generated during construction of BSL3-Biobank, and refurbishment activities on health centers, entry points induce but not limited to Incidents/accidents, gender-based violence, sexual exploitation and abuse, air and water pollution due to generation of waste, child labour, environmental degradation due extraction of natural resources such as sand, stones, cutting trees, noise pollution, delay in payment of workers, safety risks, poor hygienic related diseases, community health and safety, risks of disturbance of cultural heritage, exclusion of vulnerable groups, non-operational grievance redress mechanism, inefficient stakeholder engagement plan.

During operation and decommissioning phase, possible impacts associated with the projects activities also include but not limited to hazardous Wastes generation, Occupational Health and Safety Risks, risks of GBV-Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) residual Biological Contamination by pathogens, aerosol Generation During Equipment

Removal and infrastructure demolition, improper effluent handling, accidental release of pathogens into the environment. Proposed mitigation measures were elaborated. These include but not limited to: preparation of the site specific instrument (ESIA/ESMP), the preparation and implementation of ESMP by the contractor, incorporation of environmental and social related clauses into the designs, ensure the Environmental and social health and safety clauses are incorporated in tender and contracts to be signed by the contractor, implementation of integrated waste management plan, regular training of workers (especially workers on site), efficient use of natural resources (extraction of natural resources shall be done only if the license and extraction permit are issued by the competent authority)

Implementation arrangement and institutional responsibilities

RBC will collaborate with stakeholder institutions like Rwanda Environment Management Authority (REMA), Rwanda Development Board, Meteo Rwanda, Rwanda Food and Drugs Authority, Rwanda Medical Supply to seek technical advice and ensure compliance to the best practices as well as applicable standards and regulations. On project management level, RBC will undertake recruitment and procurement processes of technicians and equipment for implementation of activities including environmental and social compliance requirements as specified in this ESMF.

Stakeholder engagement, public consultation and disclosure

A separate **Stakeholder Engagement Plan** (SEP) has been developed for the Project, based on the World Bank's Environmental and Social Standard 10 on Stakeholder Engagement. The SEP can be found in the attached link¹. In development of this ESMF, potential stakeholders were consulted and the engagement will continue in all phases of the project. Special attention will be given to vulnerable community groups like women, youth, elderly and people with disability as they are the most affected by emergency situations. The engagement with different stakeholders were conducted and their views were considered during the preparation of this ESMF, the disclosure of this ESMF will be in compliance with the WB ESS10 requirements.

¹ https://rbc.gov.rw/fileadmin/user_upload/report_2024/Stakeholder_Engagement_Plan-revised.pdf

CHAPTER 1. INTRODUCTION

1.1. Background

The Republic of Rwanda, represented by the Ministry of Finance and Economic Planning (MINECOFIN) and the World Bank signed a Financing Agreement (FA) for the International Development Association (IDA) Credit of US\$120 million for the “Rwanda Health Emergency Preparedness, Response and Resilience Project Using the Multiphase Programmatic Approach” or Rwanda HEPRRP MPA. The Rwanda HEPRRP MPA is an integrated multiple–stakeholder, multi-sectoral and multi-discipline project designed to prevent and control emerging and re-emerging infectious diseases with an overall objective to attain optimal health for people, animals and the environment by achieving a collaborative approach also known as Rwanda One Health.

The project will strengthen both local and national health systems to respond to Health Emergencies by investing in critical health infrastructure and services delivery mainly through (1) Strengthening the preparedness and resilience of regional & national health systems to manage health emergencies and (2) Improving early detection of and response to HEs through a multi-sectoral approach of which have strong alignments with the Fifth Health Sector Strategic Plan (HSSP5) across all its five pillars which include (i) Health workforce (quadruple skilled health workforce, enhance education quality of health workforce, health workers’ fulfilment and satisfaction); (ii) Health infrastructure modernization (build, upgrade and maintain healthcare facilities up to standard (aptly equip health facilities, establish Kigali Health City (KHC), maximize the readiness and operationalization of health facilities); (iii) Quality of Care based on Primary Health Care (attain universal health care coverage; improve the level of population health literacy; enhanced health service availability); (iv) Health security and emergency management (protect the public from public health threats, enhance capacity for early detection, notification and response, strengthen local and international partnerships in health security); (v) Bio manufacturing, Research, Innovation, Regulation and Digitalization (advance scientific knowledge; promote research into drug and discovery; promote health related innovations; enhance digital health).

From the above project background, there will be activities that will cause environmental and social risks and impacts; therefore, this Environmental and Social Management Framework (ESMF) is developed to support the environmental and social due diligence provisions for activities financed by the World Bank in the Health Emergency Preparedness, Response and

Resilience Project Using the Multiphase Programmatic Approach, hence the Rwanda Biomedical Center (RBC) will be the implementing agency.

1.2 Approach and Methodology

1.2.1 Approach used to collect field data and analysis

The E&S team visited proposed intervening Districts to collect general information related to environmental and social aspects regarding to the project Investments, status of existing infrastructure, and views of the stakeholders. Special attention was paid to key stakeholders (administrative district officials) and officials of the health institutions. This exercise helped to identify criteria that will need special attention in prioritization of activities and implementation of this project. The exercise also helped in identifying the capacity gaps and needs for the implementation of and ensuring compliance with environmental and social aspects of the project.

Secondary data will be collected, analyzed, and presented to describe the environmental and social baseline of the project sites after their confirmation. They will be collected from literatures on the environment (soil, vegetation, flora and fauna) and socio-economic aspect from census and demographics data, especially for Masaka Medical Hub, the site for construction of the Level 3 Biosafety Laboratory and Biobank. In addition, qualitative approaches will be used to collect additional data from relevant government institutions through on rolling consultations and engagement. Further, at each project component, activity and implementation stage, the likely E&S risks and impacts were assessed and the corresponding mitigation measures recommended to ensure minimization of the risks and impacts to the community and the environment. Particularly, risks and impacts associated with exposure to risk group 3 pathogens from the level 3 biosafety laboratory and biobank, health and safety and risks due to the exposure of the community and workers to healthcare wastes were given particular attention. The team from different stakeholder institutions have conducted the engagement with the stakeholders and other institution to ensure that all concerns and views are recorded and incorporated within this ESMF; subsequently, the E&S team revealed that the implementation of the ESMF will require an estimated budget equaling to 2,800,000USD for the capacity building to skilled and unskilled staff and other activities related to social and environmental management. The E&S experts from RBC and stakeholder institutions who have contributed to development of this ESMF are listed in annex 19.

CHAPTER 2. PROJECT DESCRIPTION

2.1 Project Development Objectives and beneficiaries

The PDO is to strengthen health system resilience and multi-sectoral preparedness and response to health emergencies in the Republic of Rwanda. It will strengthen the prevention, detection and response of Rwanda's health system to the health emergency events through development and upgrading health infrastructures, strengthening the existing One Health Multi-Sectoral Coordination Mechanism and capacity building of healthcare professionals. This project is of national scope and will benefit the 14 million inhabitants of the country. It will also directly benefit about 100,000 people who are expected to cross the borders from the neighboring countries.

In particular, the project will benefit the category of vulnerable people including women and child headed households, elders, widows, people with disability, etc. Additionally, the beneficiaries include livestock farmers and the general population, who will benefit from less exposure to a disease which can be transmitted to humans from animals, a condition known as zoonosis. Finally, all new and existing health workers and staff of public health, veterinary services and laboratories involved in health emergencies preparedness and response will benefit from the capacity building and continuous support.

The country will benefit from support from the regional entities as well as from advanced peer-to-peer learning opportunities available to all countries participating in the HEPRR MPA and existing public-private partnerships with regional and international bodies.

2.2 Project components and activities

Rwanda has experienced frequent emergency events in recent decades leading to losses of lives and damage of infrastructures, emphasizing the need for strong preparedness and response capabilities. To strengthen its health emergency system, the Government of Rwanda (GoR), through the Rwanda Biomedical Centre (RBC), has developed the "Rwanda Health Emergency Preparedness, Response and Resilience Project (Phase 4)," using the Multiphase Programmatic Approach. This project aims to strengthen Rwanda's health system resilience and multi-sectoral preparedness and response to health emergencies through four complementary components:

Component 1: Strengthening the Preparedness and Resilience of the Health System to manage Health Emergencies (HEs). This component comprises four subcomponents which are the following:

Sub-component 1.1. Multisectoral cross-border planning, financing, and governance for improved resilience to HEs. This subcomponent will: (i) strengthen the existing One Health Multisectoral Coordination Mechanism; (ii) develop a costed and financed national multisectoral action plan for One Health; (iii) strengthen cross-border response, including the expansion of the cross-border functional surveillance systems at points of entry with the corresponding training (climate change is a primary impetus and focus of these activities); and (iv) strengthen infection prevention and control initiatives that ensure appropriate guidance and measures at health facilities within districts at the borders to better address the antimicrobial resistance burden.

Sub-component 1.2. Health workforce skills development. This subcomponent aims to strengthen existing capabilities, harmonizing knowledge and skills and building specialized diagnostic skills and capacity among the health workforce for advanced technologies while addressing gender gaps. It will seek to: (i) establish a gender-sensitive training program to ensure gender inclusivity in Science, Technology, Engineering, and Mathematics (STEM); (ii) establish a specialized training program to offer state-of-the-art training on advanced biomedical sciences and instrumentation used in cutting-edge diagnostics including bioengineering, molecular and immunological techniques and using energy-efficient and climate-adaptive building designs as well as local materials; (iii) develop project-based mentorship initiatives led by university-affiliated faculty who will provide selected graduate students (keeping in mind inclusion of female graduate students and students from climate-vulnerable areas as feasible) with hands-on opportunities to develop diagnostic assays responding to unmet clinical needs; (iv) train additional professionals such as field epidemiologists, data scientists, bioinformaticians and laboratory professionals, under an equity lenses for gender and inclusion of professionals from climate-vulnerable areas as feasible; (v) develop and execute a focused climate and health emergency preparedness and response training; and (vi) develop a system for health workforce surge capacity during climate shocks and HEs to ensure health workers are distributed adequately where most needed without leaving essential services unattended.

Sub-component 1.3. Building capacity for the National Health Institute and improving access to quality health commodities. This subcomponent aims to strengthen Rwanda's capacity to develop, produce, and deploy quality diagnostics for priority health threats. Key investments will include: (i) the expansion of the Rwanda Biomedical Centre as the National

Health Institute of the country into the Diagnostics Development and Research Centre using energy efficient and climate and gender-adaptive building designs as well as local materials. It will drive innovation of affordable diagnostic solutions targeting leading regional infectious disease threats including emerging/re-emerging epidemics like Rift Valley fever, typhoid, Ebola, and vaccine-preventable diseases like measles. It will support the translation of promising technologies into quality-assured diagnostic products for domestic use and export; (ii) the expansion of the National Health Institute to include the One Health Laboratory and Biobank facility for testing emerging and re-emerging pathogens, including development of national reference standards to manage climate-sensitive disease outbreaks; (iii) technical assistance (TA) to review national laws and other applicable rules on storage, distribution, and control, to determine the adequacy of the technical, legal and regulatory frameworks and its consistency with international best practice; identify any gaps, and implement measures for filling those gaps; (iv) TA on the development of a One Health laboratory in Rwanda including risk management and human resource development; (v) strengthening the capacity of the National Regulatory Agencies and Regional Centers of Regulatory Excellence; and (vi) TA to develop a five-year roadmap, plans of action, and strategy to guide the functioning of the centers (Diagnostics Development and Research Center, One Health Laboratory and Biobank facility) and lead the implementation of enhanced quality laboratory protocols.

Sub-component 1.4: Information systems for HEs and the digitalization of the health sector. This subcomponent aims to strengthen real time surveillance and decision support capabilities, leveraging artificial intelligence and advanced analytics. Key activities include: (i) establishing digital disease surveillance platforms across institutions that include village-based registries of health risks from human, animal, and environmental sources, incorporating gender-specific demographics (age, sex, pregnancy status) to enable early outbreak detection, establishing and updating them on an annual basis. In addition, establishing climate change risks is a primary impetus and focus of this activity; (ii) building interactive data visualization tools for policymakers that overlay predictive models with assets and resources data to aid risk communication and response planning that can be gender-specific as relevant, such that modelling of climate change impacts remains a primary impetus and focus of this activity; (iii) improving the quality and reliability of data and geographic coverage of existing digital health information platforms; this includes ensuring complete and accurate data on key demographics such as sex, age and (for women 15–49 years of age) pregnancy status, and ensuring coverage

of the most remote and vulnerable areas of the country; (iv) establishing real-time monitoring systems of facility service availability and readiness to monitor the disruption to essential health services; and (v) integrating meteorological and air quality related data into the surveillance and health information system.

Component 2. Improving early detection of and response to HEs through a multisectoral approach. This component will support operational readiness and capacities across critical subsystems to effectively detect and respond to national, regional, and global HEs. The component has three subcomponents which are:

Sub-component 2.1. Collaborative multisectoral gender-responsive surveillance and laboratory diagnostics. Major investment under this subcomponent will include: (i) establishing an emergency operations center on a permanent basis to coordinate health security efforts with integrated data dashboards for gender-disaggregated surveillance to prepare for and respond to climate shocks or other sources of HEs. It includes developing capacity to quickly reorganize and utilize alternative service-delivery platforms to prevent service disruption during emergencies, and the development of facility level climate emergency preparedness and response plans; (ii) expanding multi-pathogen testing and sequencing abilities to better characterize and monitor the dynamics of public health threats; and (iii) strengthening environmental surveillance systems to monitor wastewater for emerging and re-emerging public health threats like COVID-19, polio, mpox, cholera, and so forth.

Sub-component 2.2. Emergency management, coordination, and essential service continuity. This subcomponent will ensure the readiness and quality of essential services provided to the population and the continuity of services and coordination across levels of care to respond to HEs. The primary focus will be on service continuity during climate shocks and HEs given their level of disruption to health services. Under this subcomponent, the project will finance the following activities: (i) Improving the quality of maternal, newborn, child and adolescent health services, including the optimization of existing Maternal Neonatal Children Health (MNCH) interventions, as well as the adoption and implementation of MNCH bundles and innovations. It includes supporting, rehabilitating, renovating and upgrading eight existing health centers to “Medicalized Health Center” level facilities in selected remote areas and hard-to-access district hospitals, equipment and implementation of norms and procedures for Maternal and Child Health (MCH), NCDs, Mental Health and HE; and (ii) Strengthening mental health preparedness and response capacity for public HEs, including the case

management for referral systems for standard and HE cases including the transfer system for MNCH emergencies, worsening NCD cases and quick assistance to suspected cases of pandemic-prone diseases. It includes well-equipped ambulances and staff trained in emergency neonatal care, obstetric care, and basic life support.

Sub-component 2.3. Risk communication and community engagement, empowerment, and social protection for all HEs. Communication on climate change and health risks is a primary impetus and focus of this component. Key activities include: (i) leveraging community health workers (CHWs) to drive public health emergency protection awareness and behaviors among communities; (ii) developing gender sensitive public health risk communications with appropriate media including mass media (TV and radio) and community level platforms (village meetings, school health clubs, and so forth); (iii) developing a national climate and health adaptation plan with the community; (iv) assessment of health system performance during climate shocks; and (v) execution of climate shock response simulation exercises.

Component 3. Project Management. This component will ensure efficient and effective management and implementation of the project by the Rwanda Biomedical Centre (RBC). It will finance: (i) strengthening project monitoring and evaluation (M&E); (ii) providing need-based TA and facilitating data-based cross-border learning initiatives, and the learning agenda in collaboration with WHO, IGAD and ECSA-HC; and (iii) supporting other aspects of project management such as recruitment of staff, procurement, financial management, environmental and social risk management, and reporting under the project through the provision of technical advisory services, training, operating costs, and acquisition of goods.

Component 4. Contingent Emergency Response (CERC). This component will facilitate access to rapid financing by allowing for the reallocation of uncommitted project funds in the event of a natural disaster in a country, either by a formal declaration of a national emergency or upon a formal request from the government. Following an eligible crisis or emergency, the government may request that the World Bank reallocates project funds to support emergency response and reconstruction. A CERC Manual, a CERC ESMF and an Emergency Action Plan acceptable to the World Bank, will be prepared and constitute a disbursement condition for this component.

The project interventions will be implemented in Masaka Medical Hub (Biosafety Level 3 Laboratory and Biobank) and at different points of entry (Kanombe, Kamembe and Bugesera airports, other borders with neighboring countries and remote health centers with constraints to

access district hospitals) for emergency preparedness and response as well as upgrading/renovation of HCs to medicalized HCs. This Environmental and Social Management Framework (ESMF) has been prepared to identify the potential environmental and social risks and impacts of proposed project activities and propose suitable mitigation measures to manage these risks and impacts.

It maps out the national and international policies, laws and regulations and the World Bank and other reputable institutions' standards and guidelines applicable to the Project, and describes the principles, approaches, implementation arrangements, and E&S requirements.

CHAPTER 3. RELEVANT POLICIES, LEGAL AND REGULATORY FRAMEWORK

The next sections summarize policies, laws and regulations applicable to the project and information on the applicable social and environmental guidelines for domestic regulations, the World Bank’s Environmental and Social Standards (ESS) and the World Health Organization.

3.1 Relevant Policies, Legal and Regulatory Framework

Table 1: National Policy and Regulatory Framework relevant to the project

Policy/Law	Description and Relevance to Project Activities
The constitution of the republic of Rwanda, 2003 revised in 2015 and 2023	<p>The Rwandan Constitution guarantees every citizen the right to a healthy environment and obliges them to protect and promote it. It emphasizes national unity, prohibiting all forms of discrimination based on ethnicity, gender, religion, disability, or other factors. Citizens are entitled to equal access to public services based on competence and ability.</p> <p>These commitments align with World Bank ESS1, ESS3, ESS4, and ESS6.</p>
Revised Gender Policy, 2021	<p>The policy aims to enhance gender equality by improving women’s access to resources, opportunities, and protection from GBV and discrimination. It guides the development of a Gender Action Plan, anti-GBV guidelines, and gender mainstreaming in project implementation. Project progress reports shall highlight gender segregated data to show how decision making and benefits sharing are gender inclusive. The policy’s provisions align with WB ESS4.</p>
Revised Green and Grow Climate Resilience Strategy (GGCRS), 2022	<p>The revised GGCRS supports Rwanda’s Vision 2050 by promoting a climate-resilient, low-carbon development pathway. It aligns national priorities with global and regional agendas, including the SDGs, AU Agenda 2063, EAC Vision 2050, and Paris Agreement commitments. Its strategic objectives include fostering social protection, better health, and disaster risk reduction to reduce climate vulnerability. This directly complements the Rwanda HEPRR Project and aligns with World Bank ESF.</p>

Policy/Law	Description and Relevance to Project Activities
<p>National Strategy for Transformation _Phase2 (2024 – 2029)</p>	<p>The strategy focuses on improving health quality by reducing maternal and child mortality, professionalizing health workers, and strengthening Community Based Health Insurance (CBHI) services. It emphasizes constructing and upgrading health facilities, promoting healthy lifestyles, disease prevention and enhancing preparedness for health emergencies. These priorities align closely with the project’s development objective.</p>
<p>National Environment and Climate Change Policy of 2019</p>	<p>The policy addresses environment and climate change concerns in general. It emphasizes the commitment to address climate change and resolves to lessen the potential hardships that climate change may pose to the sustainable development of Rwanda. The proposed project will integrate environmental and climate change aspects into the decision-making process to ensure that its activities lead to improved development and wellbeing of the citizens of Rwanda.</p> <p>It also supports the constitution’s objective of positioning Rwanda to be a nation that has a clean and healthy environment, resilient to climate variability and change and that supports a high quality of life for its society. The policy requires project activities to consider principles that complement the WB ESS1 and ESS10 including: Assessment of environmental risks and impacts for development projects; setting mitigation and adaptation measures; information dissemination and community awareness raising sessions to ensure engagement of the community and ownership of the project interventions.</p>
<p>Law on Environment Number 48/2018 of 13/08/2018</p>	<p>This law sets out the general legal framework for environmental management in Rwanda. It highlights the environment as one of the priority concerns of the Government of Rwanda. Article 3: Precautionary principle; Activities considered or suspected to have negative impacts on the environment have to be implemented after conducting scientific assessment to identify such risks and impacts and propose their avoidance or mitigation measures.</p> <p>The law gives every natural or legal person in Rwanda to contribute individually or collectively to safeguard the country’s natural, historical and socio-cultural heritage.</p>

Policy/Law	Description and Relevance to Project Activities
	<p>This law will apply to sub-projects involving activities that change the natural environment, leading to environmental degradation. These will require environmental assessment studies prior to their implementation and, depending on their risk levels, they may require certification by RDB and/or REMA. The assessments and studies will also be guided by the WB ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8 and ESS10.</p>
<p>Ministerial Order no 003/MoE/25 of 19/08/2025 relating to environmental and social impact assessment</p>	<p>This M.O establishes the list of Projects that must Undergo Environmental and Social Impact Assessment, Instructions, Requirements and Procedures to Conduct Environmental and Social Impact Assessment. Every project listed in the annex One of the M.O has to be guided by a completed study on social and environmental risks and impacts that may result during its implementation and/or execution. The assessments and studies will be guided by the WB ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8 and ESS10. This order will apply specifically to sub-projects involving infrastructure development activities such as construction of Level-3 biosafety laboratory as they are likely to have negative risks and impacts to the environment and the community.</p>
<p>Rwanda Labor law No. 27/2023 of 18/05/2023</p>	<p>Rwandan labour Law allows hiring fixed term contract workers for tasks of permanent nature. A worker hired for a fixed-term or an unspecified period that lasts more than six (6) consecutive months with the same employer is considered a permanent worker.</p> <p>It stipulates several provisions for employment contracts, Occupational Health and Safety (OHS) and general working conditions. The law will apply to the project activities that will require employment of workers to ensure their health and safety are safeguarded. The Rwanda labor law is in line with the WB ESS2, ESS4 and WB EHS guidelines.</p>
<p>Law No. 32/2015 Relating to Expropriation in the Public Interest</p>	<p>It defines expropriation in the public interest as well as fair compensation in terms of the value of land and the activities performed thereon given to the person to be expropriated and calculated in consideration of market prices as well as compensation for disturbance due to expropriation’.</p>

Policy/Law	Description and Relevance to Project Activities
	The law will apply to projects whose activities will entail resettlement and compensation. Where applicable, a site-specific instrument, the RAP/baseline valuation report, detailing the modalities of resettlement and compensation will be developed.
National strategy for implementation of biosafety framework, 2020	The strategy supports Rwanda’s Environment and Climate Change Policy, particularly enhancing ecosystems and ensuring biosafety in biotechnology use. It aims to safeguard public and environmental health through accident prevention, containment, and proper waste disposal when GMOs are utilized in research and development (R&D) and industrial processes. The strategy establishes measures for risk assessment, monitoring, and mitigation in all biotechnology operations. It will guide the construction and operation of the Level 3 Biosafety Laboratory and the management of biosafety materials throughout the project.
National Health Sector Policy, 2015	The policy seeks to improve health programs by ensuring access to quality services, including Infectious Diseases Surveillance and Research (IDSR) and Disaster Preparedness and Response through primary health care. It aligns with WHO’s International Health Regulations (IHR), focusing on legislation, financing, coordination, communication, surveillance and rapid response to public health emergencies. It also emphasizes risk communication, human resource capacity, and mechanisms for detecting/responding to zoonotic, food safety, chemical, and radiation events. Overall, the policy supports the project objective of strengthening Rwanda’s health services and resilience.

3.2 World Bank Environment and Social Framework (ESF)

The World Bank’s ESF includes 10 Environmental and Social Standards (ESSs) to ensure projects are socially and environmentally sustainable. These standards require borrowers to identify and assess environmental and social risks and impacts in Bank-financed projects. The HEPRR project will apply both ESSs and World Bank Group EHS Guidelines throughout its phases. The project has been classified as a “**Substantial Risk project**,” acknowledging potential risks alongside expected positive benefits.

The WB ESSs will: (a) support Rwanda Biomedical Center (RBC) in achieving good international practices relating to environmental and social sustainability; (b) assist RBC in fulfilling the national and international environmental and social obligations; (c) enhance non-discrimination, transparency, participation, accountability and governance; and (d) enhance the sustainable development outcomes of the project through periodic stakeholder engagement sessions.

3.2.1. Summary of identified environmental risks

The project will strengthen cross-border health preparedness and expand the National Health Institute into a Diagnostics Development and Research Center with subprojects that involve civil works which may generate EHS risks. Digital health expansion may create **e-waste** and additional healthcare waste, leading to pollution and health hazards. The Diagnostics Development and Research Center will house a Biosafety Level-3 laboratory in alignment with the One-Health network with capabilities for diagnostic, teaching/training and research facilities handling indigenous or exotic agents which may cause serious or potentially lethal disease as a result of exposure by inhalation and other route.

3.2.2. Summary of identified Social Risks

The project’s **social risk was rated moderate**, linked to labor conditions (OHS, SEA/SH), community health and safety concerns, and hazardous waste handling. Risks also include potential pathogen leakage from the BSL-3 lab and complaints from workers or nearby communities.

In regards of the above identified risks and the others that may arise during implementation and/or operation, the WB’s environmental and social standards relevant to the project activities are summarized below;

Table 2: World Bank ESSs relevant to the project

E&S Standard	Relevance to the project
ESS1	The HEPRR project triggers ESS1 due to anticipated E&S risks during construction, installation, and operations, including pollution, OHS hazards, and medical and infectious waste mismanagement. Activities such as establishing a BSL-3 lab, expanding cross-

E&S Standard	Relevance to the project
	border surveillance, and rehabilitating health facilities may generate hazardous waste whose improper handling, transport and disposal could cause risks that affect workers and the public. The E&S staff from RBC will screen subprojects and recommend guiding instruments in line with national regulations and WB ESSs.
ESS2	<p>The HEPRR project will involve direct workers under RBC SPIU, contracted workers through consultants/contractors, and primary suppliers providing medical devices, pharmaceuticals, and logistics. Labor risks include OHS hazards (physical, chemical, biological), exposure to infectious waste, SEA/SH, forced/child labor, and community health issues. Risks differ across phases: construction (discrimination, accidents, wage/condition complaints) and operation (infectious waste exposure, poor labor conditions).</p> <p>The Labor management plan will be developed to guide the PMU on how to contain the labor related issues, including guidance on establishment and operationalization of the GRM to be the first step in solving complaints from workers. The LMP will be aligned with the provisions of the WB ESS2.</p>
ESS3	<p>The ESS3 is relevant to the project as pollution prevention and management measures will be necessary to manage all kinds of wastes which could be generated during project activities. Wastes may lead to chemical pollution from the use of disinfectants and medical supplies, leading to water and soil contamination, generation and improper disposal of medical waste, e-wastes, including hazardous materials like biohazard waste and contaminated medical appliances causing significant risks to public health and the environment. Additionally, the energy-intensive operations and infrastructure development during emergency response activities can contribute to higher energy and water consumption, and greenhouse gas emissions as well as noise pollution from unmaintained vehicles.</p>
ESS4	<p>The ESS4 will be relevant to the project while addressing risks to the community health associated with small civil works causing dust and noise pollution and water pollution from fuel/chemical leakages as well as construction debris, exposure of the community to infectious diseases from improper management of medical waste and improper containment measures in biosafety labs, risk of injuries, community health and safety risks</p>

E&S Standard	Relevance to the project
	related to GBV, SEA/SH, health and safety risks from hazardous and health care wastes , accidents, transmission and spread of HIV/AIDS and other communicable diseases and GBV/ SEA/SH risks.
ESS5	Currently, the project is not planning land acquisition process but this may emerge. In the case, the PMU shall ensure that resettlement activities are planned and implemented with appropriate disclosure and according to the provisions of the Rwanda expropriation law and the WB ESS5.
ESS6	Impacts on natural resources such as water and biodiversity are likely to result from construction works, waste generation and improper waste management and disposal; especially waste water from medical facilities. Site specific waste management plans will be developed to ensure proper containment of the risks and impacts to biodiversity and natural resources.
ESS8	<p>Though proposed project construction works will be conducted within existing infrastructures, the extension of the Diagnostic Development Research Center and the Biosafety laboratory, or the sourcing of local materials for construction, such as sand, make these standard relevant as cultural resources or historic remains may be encountered during soil excavation or houses demolition works.</p> <p>A chance find procedure will be developed and annexed to site specific instruments that will guide environmental and social management during the implementation stage of sub project activities.</p>
ESS10	The ESS10 is relevant given the need to engage with beneficiaries on development activities that affect their lives as well as stakeholder institutions to ensure smooth implementation of the project. The Stakeholder Engagement Plan (SEP) has been developed and highlights relevant stakeholders to be engaged in the project cycle and their responsibilities for the success of the project.

3.3 Gap Analysis between National regulations and World Bank ESS

A review between Rwanda’s national regulations and the World Bank’s Environmental and Social Standards (ESSs) shows some misalignments. To ensure compliance, World Bank ESSs will prevail where gaps exist. The purpose is to harmonize national and international

requirements for effective environmental and social risk management in HEPRRP. Details of the identified gaps are summarized in Annex 14.

3.4 World Bank EHS Guidelines

The World Bank's EHS Guidelines outline performance measures to avoid, minimize, and control impacts across project phases. The main focus shall be put to:

- **Waste Management Facilities:** Guidance on design, construction, operation, and decommissioning of waste facilities such as landfills, incinerators, recycling centers, and composting sites. For HEPRRP, these shall apply to healthcare wastes from facilities, the BSL-3 lab, and biobank, and must be integrated into ESMPs and contractor obligations.
- **Pharmaceuticals & Biotechnology Manufacturing:** to address risks related to wastewater, emissions, hazardous waste, occupational health and safety (OHS), and resource efficiency. The guidelines ensure safe handling of pathogens, harmful chemicals, and physical hazards in pharmaceutical and biotech operations.

3.5 World Health organization (WHO) Guidelines

World Health Organization (WHO) guidelines stand for any information product developed by WHO that contains recommendations for clinical practice or public health policy

- **WHO guidelines on Pharmaceutical Products:** WHO Guidelines on Pharmaceutical Products provide a global framework to ensure the safety, quality, and efficacy of medicines, focusing on Good Manufacturing Practices (GMP), Good Storage Practices (GSP), and Good Distribution Practices (GDP). These guidelines will be adopted for HEPRRP to ensure the operation of its investments including healthcare facilities, BSL-3 lab, and biobank, do not provide any harm to health and the environment.
- **Good Regulatory Practices:** Governments must ensure access to safe, effective, and affordable medical products. Rwanda FDA oversees regulation of medicines, vaccines, devices, cosmetics, and chemicals, with a robust legal framework (e.g., regulations on import/export, recalls, and disposal of unfit products). This is done through market surveillance, testing, and decision-making for public health protection.
- **Transport of Infectious Substances:** WHO guidance covers classification, packaging, labeling, training, and shipment documentation. Rwanda's National Healthcare Waste Management Guidelines (2016) align with these, emphasizing segregation, labeling, storage,

treatment, and disposal. As a Basel Convention signatory, Rwanda commits to reducing hazardous waste generation and ensuring sound disposal.

- **WHO Laboratory Biosafety Manual (2020):** Promotes a risk-based approach to biosafety with requirements for containment, engineering controls (negative pressure, HEPA filters), SOPs, training, and PPE use.
- **WHO Biosafety Guidelines:** Stress advanced engineering controls such as Class III biosafety cabinets, HEPA filtration, and effluent decontamination systems (EDS) to ensure inactivation of pathogens before waste release.
- **WHO Transport Guidance (2023–2024):** Requires strict regulation, training, and authorization for shipping infectious substances, including permits and biosafety approvals for import/export managed by RBC.

3.6 OIE (World Organization for Animal Health) Standards

The OIE Terrestrial Animal Health Code and Manual provide biosafety and biosecurity guidance for veterinary labs. They are particularly relevant for One Health BSL-3 facilities handling zoonotic and animal pathogens, ensuring safe management of cross-species risks.

CHAPTER 4. BASELINE INFORMATION ON PROPOSED PROJECT LOCATION

This chapter outlines the environmental and social parameters that need to be collected during the development of Environmental and Social Impact Assessment or Environmental and Social Management Plan for a particular subproject depending on screening findings.

The table Below summarizes key parameters which will be considered after site identification to develop site specific environmental and social instruments.

Table 3: Environmental and social parameters to be considered for site specific instrument development

Category	Parameters to be considered	Relevance for ESIA/ESMP-CESMP
Site identification	Site location, current land use and ownership	Administrative boundaries (district, sector, cell, village), residential, health facility, agricultural, forested, industrial, existing infrastructure land tenure and ownership details, etc. This information will be needed in regards to site description, risks and impacts identification and setting mitigation measures.
Physical Environment	Climate (rainfall, temperature, extreme events, seasonality)	Assess climate-sensitive health risks (vector-borne diseases, heatwaves, floods)
	Air quality (dust, emissions, indoor air pollutants)	Identify respiratory health risks (TB, asthma, pneumonia)
	Water quality & availability (pH, turbidity, microbial contamination, heavy metals)	Prevent waterborne diseases (cholera, typhoid, diarrhea)
	Waste management (medical waste, solid & liquid waste)	Identify biomedical waste risks and need for treatment facilities
	Noise & vibration (near health facilities and communities)	Assess disturbance impacts, especially near hospitals

Category	Parameters to be considered	Relevance for ESIA/ESMP-CESMP
	Soil types	This will be required to facilitate and inform bidders during bidding and bill of quantity preparation
	Topography (slope, wetland, valley)	This will be required to facilitate and inform bidders during bidding and bill of quantity preparation as well as the required permits but also mitigation that can be put in place to avoid, reduce any potential impact resulting from the project's activities.
Biological Environment	Disease vectors (mosquito breeding sites, rodents, livestock-human interactions)	Monitor risks of malaria, dengue, zoonotic diseases
	Biodiversity linked to public health (wetlands, forests, livestock grazing)	Understand ecological-health linkages (zoonotic spillovers, food security)
Social Environment	Population demographics (age, gender, vulnerable groups)	Identify at-risk groups (children, elderly, disabled)
	Health status & disease burden (HIV, malaria, TB, NCDs, outbreaks)	Identify priority health risks & baseline disease data
	Access to healthcare (coverage, referral systems, distance to facilities, staffing)	Assess gaps in healthcare infrastructure & workforce
	Water, sanitation & hygiene (WASH)	Essential for infection prevention & control
	Type of land use for development of the infrastructure	The ESIA or ESMP will consider the land use management during the project infrastructure development as well as required permits for construction and other constructions'

Category	Parameters to be considered	Relevance for ESIA/ESMP-CESMP
		aggregates acquisitions as well as comply with the land use master plan.
	Livelihoods (agriculture, informal jobs, healthcare workers)	Assess economic vulnerability and ability to cope with health shocks
	Education & awareness (literacy, health knowledge, outbreak awareness)	Evaluate capacity for health promotion and community preparedness
Cultural & Community Aspects	Cultural beliefs & practices on health (traditional healing, burial practices)	Identify cultural sensitivities (e.g., Ebola burial practices)
	Community trust in health systems	Crucial for vaccination uptake & outbreak response
Labor & Working Conditions	Health workforce conditions (PPE availability, OHS practices, workload)	Assess staff/ workers safety and burnout risks or issues that can hinder the project activities
Gender & Social Inclusion	Local employment & skills (health and support staff)	Identify training & capacity-building needs
	Gender roles in caregiving & health access	Identify barriers to women’s healthcare access
	GBV, SEA, SH risks in health projects	Integrate GBV/SEA/SH prevention into health programs
Legal & Institutional framework	National health & environmental laws/regulations	Ensure compliance with health, waste, and safety regulations
	International standards (WHO, World Bank ESF)	Align with donor/development partner requirements
	Institutional capacity for health emergency response	Assess response readiness and capacity gaps
	Other regulations and laws related to social and environment	Ensure all E&S aspects are captured during all process of environmental and social identification in-situ.

Understanding these baseline conditions is crucial for identifying potential impacts, designing appropriate mitigation measures, and monitoring the effectiveness and sustainability of project interventions. The HEPRR project will involve medium to high-risk activities such as constructing or upgrading healthcare facilities, commissioning and installation of medical equipment, handling and managing biosafety substances and infectious wastes and engaging with vulnerable communities; many of which having significant E&S implications and disturbing the natural ecosystem. During assessment of baseline information, the project preparation team may also consider existing impacts from the previous activities so that cumulative impacts in the project site.

CHAPTER 5. ENVIRONMENTAL AND SOCIAL RISKS, IMPACTS AND MITIGATION MEASURES

Health emergency preparedness, response and resilience project can help to protect public health, increase community resilience, promote social cohesion, reduce socio-economic disruption, and increase trust in authorities. The identification of Environmental and Social (E&S) risks and impacts of the project is an important step to ensure that the project interventions are sustainable.

5.1 Project Social Benefits

The Rwanda HEPRR Project will generate multiple social benefits, including improved public health through faster disease detection and containment, and protection of communities via better medical resources and awareness. It will increase community resilience and social cohesion, reduce economic disruption during emergencies, and strengthen trust in authorities. The project will also enhance human capital development through capacity building for health workers and community and improved health infrastructure, including laboratories, isolation units, hospitals, and other healthcare facilities. In addition, the project will generate income to the community through various ways including job creation, and business creation among others.

5.2 Project Environmental Benefits

The investments in safe biomedical waste management will reduce environmental pollution and health risks. Efficient use of resources such as water and energy use in health facilities will be adopted. The benefits for environment will be aligned with compliance with the laws, regulations and policies related to environment by promoting and protecting ecosystem in general throughout the project lifecycle.

5.3 Project E&S risks and impacts and mitigation measures

Generally, the sub-project activities likely to generate potential E&S risks at the project level are subproject activities to be financed under components 1 and 2 like (a) construction and equipment installation in health facilities, including the National Emergency Operation Centre and PoE health facilities; (b) collaborative surveillance and laboratory diagnostics, involving

sample collection, transport, and handling of hazardous and infectious wastes; and (c) digitalization of health systems and Public Health Emergency information, which may produce e-waste. The adverse and beneficial environmental and social risks and impacts associated with the HEPRR project subcomponent activities are described in the following section.

5.3.1. General risks and impacts

The table below summarizes the general environmental and social risks and impacts associated with the HEPRR project.

Table 4: General Environmental and Social Risks

Component Activity	Negative Risks and Impacts
	Construction phase
<p>Under Component 1: Operationalization of 19 health border facilities at key points of entry, including and expansion of the National Health Institute into a Diagnostics Development and Research Center, featuring Construction of a Biosafety Level 3 laboratory and Bio Bank</p>	<p>Risk 1: excavation of soils may result in vegetation clearing and disturbance of natural habitat, soil erosion and surface water pollution, construction waste generation, occupational health and safety risks, community health and safety risks, labor related risks (OHS), traffic and road safety risks, accidents, risks of natural disasters, diseases outbreak, risk of fire outbreak, etc.</p> <p>Risk 2: Noise and vibrations due to the operation of construction equipment impacting primarily medical personnel and patients in the facilities and surrounding community members. There is also risk of air pollution due to dust from construction site</p>
<p>Under component 2: Improving Early Detection and Response to Health Emergencies (HEs) via rehabilitation and upgrading of health infrastructure, especially health centers in remote areas, medicalization of 8 health centers and procurement of well-</p>	<p>Risk 3: The Biosafety Level-3 laboratory and biobank; the risks and impacts include the risk of pathogen escape leading to local outbreaks (e.g., TB, emerging viruses), lab-acquired infections among staff, contamination of air, water, or soil through improper disposal of biological waste, exposure to infectious agents due to PPEs failure or procedural error, high stress levels among workers, power failure affecting ventilation and containment systems, Equipment malfunction (e.g., autoclave, BSCs), biohazardous waste from degraded samples or expired reagents, long working hours can lead to physical and psychological fatigue, etc.</p> <p>Risk 4: There is a risk of excluding individuals under vulnerable groups like women, youth, PWD, etc for both casual and contractual workers’ employment. Children may be engaged in forced works.</p>

equipped ambulances to enhance emergency response capacity	<p>Risk 5: Community health and safety issues may emanate from the improper handling, transportation and disposal of hazardous and infectious waste, risks of GBV, SEA/SH. Labor and working conditions risks including OHS, SEA/SH from workers may arise too.</p>
	<p>Risk 6: The data may be not accurate and reliable due to the quality control mechanism in place as well as default from data collection equipment resulting in biased decision-making.</p>
	<p>Risk 7: The use of emerging technology may result in generation of electronic wastes from machines and medical devices.</p>
	<p>Risk 8: There is a risk of increasing the cost for healthcare services to the level that is not affordable by most of the communities.</p>
	<p>Operation phase</p>
	<p>Risk 9: increased generation wastes (pharmaceutical waste, infectious waste, chemical waste, general healthcare waste from material consumption-disposable gloves, masks,) Air Pollution from emissions e.g during the treatment of healthcare waste through incineration, emissions from the laboratory. Community health and Safety Risks (substandard drugs and medicine, pathogen release) OHS risks to healthcare workers from exposure to infectious wastes Water and soil contamination from disinfectants and medical supplies used</p>

	Challenges of e-waste management from the equipment procured.
	Decommissioning phase
	Risk 10: The site for a health facility as well as a diagnostic laboratory is exposed to chemical and hazardous wastes as well as radioactive wastes. When relocation is required, these chemical and hazardous wastes may contaminate the soil, air and nearby water bodies.

5.3.2 Risks specific to the Level 3 Biosafety Laboratory

5.3.2.1 Design stage

Risks due to the lack of alignment with the national and international biosafety regulations

Mitigation measures:

RBC will ensure engagement of one health stakeholder, conduct context-specific Environmental and Social Impact Assessment (ESIA) and follow all applicable guidelines and standards including WHO/FAO/OIE/CDC design standards and guidance.

5.3.2.2 Construction stage

- Risks due to noise and dust, risk of using unsafe materials and or/non-standard equipment. There is also the risk due to the lack of PPEs for construction workers.

Mitigation measures

Safety plans will be developed and monitored; design inspections will be conducted by competent authorities to ensure compliance to technical specifications. Class II or III Biosafety cabinets will be installed for pathogen handling experiments and exhaust management. The doors and entry points to the facility will have restricted access to authorized personnel. To increase trust and credibility, the laboratory will seek third-party certification by internationally recognized certification bodies.

- Recruitment and Employment Discrimination

Mitigation measures

- Developing clear ToRs for the needed workforce.
- Respect the provisions of the LMP on employment conditions and protection of wages
- Establish and operationalize a GRM for addressing and managing workplace and employment related conflicts or complaints;

Risk of Child Labor

Mitigation measures

- Awareness to contractors on legal consequences of child labor
- Ensure that the LMP sets risk reduction measures, including condition minimum age for workers;

5.3.2.3 Operation stage

The main issue is associated with operation of Level 3 Biosafety Laboratory and associated HCFs that will generate hazardous and infectious healthcare wastes.

Mitigation measures:

The BSL 3 laboratory design and construction will be guided by reputable guidelines like CDC/NIH Biosafety in Microbiological and Biomedical Laboratories (BMBL, 2020), WHO Laboratory Biosafety Manual (4th Edition, 2020) and other relevant operation standards and guidelines.

Wastes will be managed in accordance to the provisions of the WBG EHS guidelines and other recommended guidelines as highlighted in the ICWMP in Annex 6 to this ESMF.

Risk of GBV-Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH)

Gender based violence (GBV) and sexual exploitation and abuse (SEA) are significant concerns in health emergency and preparedness projects like HEPRR.

To minimize the risks of GBV and SEA involve implementing measures such as

- Training staff on prevention and response, establishment of codes of conduct and ensuring that reporting mechanisms are in place. It can also involve providing support and service to victims of GBV and SEA, such as medical care, psychosocial counseling and legal assistance, development and implementation of a project GBV action plan, Separate living space/toilet/latrines/shower facilities for men and women project workforce, a safe and accessible grievance mechanism.

Note: The issues related to GBV and SEA will be reported directly to the Isange One Stop Center to ensure quick support to the victim.

Risk of Infectious and Communicable Diseases

These are sexually transmitted diseases (STDs), including HIV and AIDS among workers and the surrounding community. A Labor Management Plan (LMP) was developed and gives directives to deal with such risks.

5.4 Design and operation of a BSL3 Laboratory for Avoidance of E&S Risks

To minimize environmental and social (E&S) risks from BSL-3 laboratory, RBC will take careful attention in design and construction stages to biosafety, engineering controls, operational safety, and community protection.

The World Health Organization (WHO) Guidelines will be adopted by providing applicable framework to ensure safe handling of pathogens that may cause serious or potentially lethal diseases. Referred to in the *WHO Laboratory Biosafety Manual (4th Edition, 2020)*, these guidelines emphasize a risk-based approach, adaptable to the country contexts and resources.

The guidelines will guide by providing key requirements for facility design, engineering controls, technical specifications for biosafety equipment, required operational procedures and needed capacity building trainings for staff to minimize exposure risks and prevent accidental release of infectious agents. Particularly, the WHO framework prioritizes bio risk management, sustainability, and capacity building, ensuring laboratories remain safe, secure, and functional throughout their lifecycle.

Here are the best practices and considerations:

- Comply with WHO Laboratory Biosafety Manual and national regulations
- Choose a site away from densely populated areas to reduce community exposure in case of accidental release.
- Include physical separation from other buildings or sensitive ecosystems
- Accommodate proper waste treatment and disposal facility without affecting surrounding communities
- Use High-Efficiency Particulate Air (HEPA) filtration for both supply and exhaust air, with regular testing and maintenance.
- Use Class II or III biological safety cabinets for primary containment of infectious materials.
- Treat liquid waste before discharge.
- Use autoclaves and chemical disinfectants for decontaminating solid waste, lab equipment, and PPEs.
- Develop clear protocols for handling pathogens, emergency response, and decontamination

More details on ideal description of the BSL3 laboratory and biobank are listed in *Annex 6*.

5.5. Environmental and Social Management Plan (ESMP)

The overall purpose of the ESMP is to ensure that recommendations provided in the ESMF are translated into practical management actions which can be adequately resourced and integrated into the Project phases. The ESMP provides a logical framework within which identified negative impacts shall be mitigated and positive impacts enhanced. It indicates the expected impact, actions to mitigate it, time frame, responsible body and the estimated cost. It translates the generic mitigation and management measures into actions to be undertaken during the various phases of the project. It also establishes roles and responsibilities for effective implementation of the mitigation measures.

The generic ESMP provides guidance and information to prepare and implement site specific ESMP during the course of HEPRR project implementation based on the screening/scoping outcomes, for each HEPRR subproject an ESIA and/or ESMP shall be developed based upon the specific subproject design and a final set of construction and operation phase mitigation and monitoring measures will be determined by taking the generic ESMP of this ESMF into consideration.

For mitigation measures related to design phases, RBC will collaborate with its partner institutions to make sure that the contractors, design and supervision consultancy organizations assigned to design the proposed development subprojects are incorporating the recommended mitigation measures into the design and into the technical specifications of the main project progress reports.

The sub project specific ESMPs under the HEPRR Project shall developed and capture the ESMF's recommendations on practical mitigation and management actions on anticipated risks. It will provide a framework detailing expected impacts, mitigation actions, timelines, responsible parties, and estimated costs. The site-specific ESMPs orESIAs for each subproject will be developed based on design and screening outcomes. Construction and operation phases will be implemented by contractors following the subproject-specific C-ESMPs. *Annexes 2 and 3* present generic ESIA and ESMP outlines for the HEPRR project and these will be decided and customized in the operation phase based upon existing information on subprojects and the screening outcomes.

CHAPTER 6. PROCEDURES AND IMPLEMENTATION ARRANGEMENTS

6.1 National Framework on Environmental and Social Assessment and Permitting

The Rwanda Environment Management Authority (REMA) is the central government authority responsible for managing environmental and social assessments and issuing the required permits. REMA's mandates include: (1) Developing environmental guidelines and standards, (2) Conducting and coordinating environmental and social impact assessments (ESIAs), (3) Issuing environmental permits and authorizations, (4) Monitoring environmental compliance through inspections and audits and (5) Enforcing environmental regulations and guidelines.

However, the RDB is the designated agency in Rwanda for ESIA certification and permitting. To support REMA and RDB in achieving their goals, the Rwanda Association of Professional Environmental Practitioners (RAPEP) was established to certify the experts who are able to conduct E&S assessment studies on behalf of the client. The E&S assessments are conducted in line with the requirements of the Ministerial Order no 003/MoE/25 of 19/08/2025 in the annex one related to works, activities and projects subject to environmental and social impact assessment and other environmental and social laws and regulations.

Specific to the Air Quality, REMA will facilitate in coordination and oversight implementation of air-quality management system in Rwanda including the procurement of dashboards screens, purchase spare parts for Air Quality Monitoring (AQM) stations, procurement of Air Quality Monitors and sensors, procurement of Air Quality Reference Monitors, upgrading of air quality online monitoring system, maintaining Air Quality Equipment and Systems and Update Air quality inventory report in Rwanda.

For the purpose of this project, specific role and responsibilities of REMA should include but not limited to:

- Assessing needs and develop the ToRs/Technical Specifications for the procurement of AQM equipment;
- Support the procurement processes for the AQM equipment and systems;
- REMA will monitor the air quality during health emergency prevention preparedness and response including but not limited to the Air quality data collection as well as daily analysis and reporting, warning for air pollution and inform decision making
- Conduct the workshops and seminars for increased awareness on air pollution,

- Support RBC to comply with environmental and social management framework during construction of project facilities, and health emergency;
- Coordinate with RBC in conducting climate risks assessments for health facilities in project coverage areas.

E&S Assessment process

The environmental assessment procedures start with the submission of a project description note to the RDB One Stop Center. RDB officials responsible for EIA then conduct field visits as part of a screening process, reviewing the subproject screening results. The selected expert from RAPEP prepares the ToRs and submits for either ESIA or ESMP certificate on behalf of the client to RDB which is reviewed by RDB staff and amended accordingly; the expert then carries out the study which further is submitted for review by RDB.

The expert then develops and submits the ESIA report or ESMP which is again reviewed by RDB prior to issuing an ESIA certificate. If the project is not approved, there is a room to appeal as shown in *Figure 1* below;

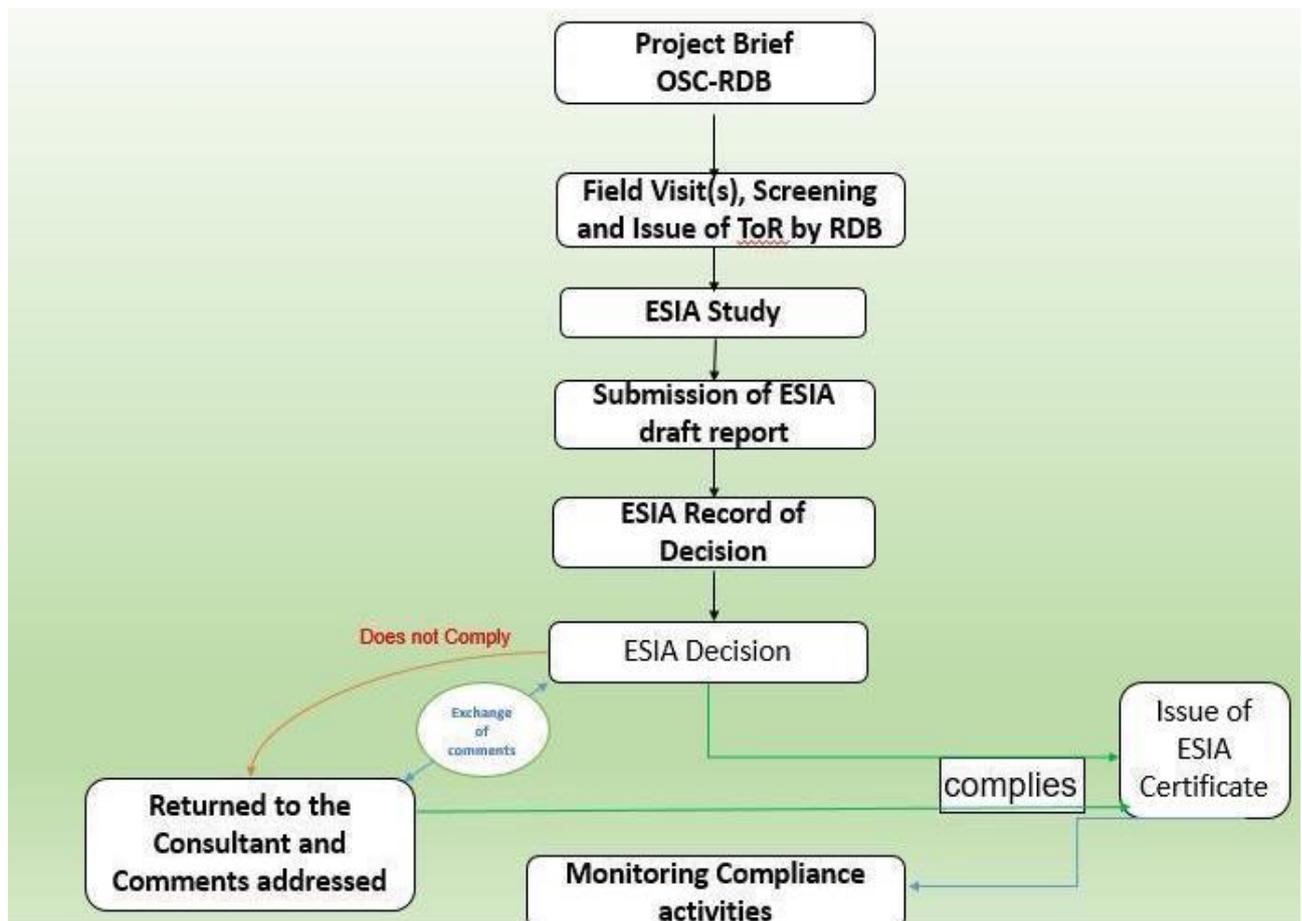


Figure 1: The ESIA Certification Process

6.2 Environmental and Social Risk Management Procedures

The environmental and social risk management procedures provide a logical framework that will be implemented through the Project’s subproject phases to mitigate identified negative risks and impacts and enhance the positive ones.

This section outlines the procedures and measures to be taken by the project management unit under the Rwanda Biomedical Center’s Single Project Implementation Unit to address site specific environmental and social risks and impacts through the identification, assessment and management in the project lifecycle. It provides guidelines for conducting environmental and social assessments and specifies the steps necessary to mitigate adverse impacts in accordance with the ESMF. The ESMF emphasizes the project's planning focus on ensuring that proposed activities are environmentally sustainable and socially acceptable in order that they do not or cause minimum harm.

This is achieved through the application of best practices and implementation of mitigation measures outlined in the previous section of this ESMF and the forthcoming risk management instruments that will be prepared once subproject’s sites are identified.

In general, the aim is by decreasing order of priority; to avoid, minimize, mitigate the negative impacts or compensate/offset for the resulting damages, and enhancement of positive impacts to the highest extent possible. The summary procedures for environmental and social risk management are highlighted in the table below:

Table 5: Project Cycle and E&S Management Procedures

Project Stage	E&S Stage	E&S Management Procedures
a. Project planning stage	E&S Framework documents	In this stage, Rwanda Biomedical Center defined the project goals, scope and high-level objectives. It also ensured that subprojects are eligible by referring to the WB requirements and exclusion list. The E&S documents proclaiming the commitment of the RBC towards compliance to the WB ESF requirements were developed and agreed upon to ensure that the project will comply with environmental and social regulations, mitigates negative risks and

Project Stage	E&S Stage	E&S Management Procedures
		<p>impacts, and promotes social inclusion and sustainability. Examples of these include the ESCP, SEP and GAP. In this stage, generic environmental and social risks of the project are predicted and the project risk ranking is done.</p>
<p>b. Sub-Project design stage</p>	<p>Environmental and Social Screening</p>	<p>Its aim is to identify potential environmental and social risks and impacts at an early stage of the project to guide decision-making on risk classification, required assessments, and mitigation measures to ensure that the project doesn't harm the community as well as the environment.</p> <p>The E&S screening uses a checklist (See Annex 1) to capture data for a specific activity's location, baseline conditions and answers questions on different categories of risks and impacts that may result from project proposed activities.</p> <p>Once the risks and impacts are identified, the project risk ranking is done and at each intervention/subproject, the required environmental and social risk management and management instrument, permits and certificates where necessary are determined to guide implementation.</p> <p>The Rwanda HEPRR project has been screened and ranked as overall substantial risk project resulting from substantial risk ranking for environmental risks and impacts and moderate social risk rating.</p> <p>Based on the outcomes of subproject environmental and social screening outcomes, site specific E&S management instruments are prepared for each subproject activities.</p> <p>Baseline environmental and social conditions are identified and the risks and impacts on them are assessed prior to deciding to the extent of analysis required and the resulting instruments to be developed.</p> <p>The site-specific E&S management instruments highlight the identified risks and impacts, propose their mitigation measures,</p>

Project Stage	E&S Stage	E&S Management Procedures
		<p>monitoring indicators and frequency, attribute responsibilities and estimate the implementation budget.</p> <p>Some of the instruments are:</p> <p>ESIA for high to substantial risk sub projects</p> <p>ESMP for moderate to low-risk sub projects</p> <p>etc</p> <p>Note:</p> <p>All the above instruments require review and non-objection from the World Bank before their implementation and starting the respective activities.</p> <p>The project management unit shall ensure that the above instruments are developed in consultation with relevant stakeholders and are disclosed and accessible by the affected communities.</p> <p>Together with these documents, all permits and clearances required under the government’s Environmental Regulation are sought in this stage for smooth implementation of activities.</p> <p>Contractors’ relevant environmental and social procedures and plans will be incorporated into bidding documents and a capacity building training delivered to contractors on relevant procedures and plans.</p>
c. Project Implementation stage	E&S management instruments implementation and monitoring	The E&S Monitoring Plans; these highlight the indicators to be monitored and the frequency. Monitoring checklists are developed for specific risks such as Health and Safety, noise and dust, waste management, water quality, workers’ management, GBV and grievance resolution, chemicals and hazardous products management and incidents tracking checklists.
d. Execution and	E&S Monitoring	In the decommissioning stage, project completion reports are developed, covering the following elements; final impact

Project Stage	E&S Stage	E&S Management Procedures
decommissioning stages	plans and reports	<p>evaluation, resources use (financial report), documentation of project’s results and lessons-learnt.</p> <p>This planned project may result in the release of the hazardous wastes as well as the release of biosafety substances, a site restoration plans and site-specific remediation plans would be recommended at this stage.</p> <p>Note: Staff responsible for implementation and monitoring of plans are trained to ensure full understanding and ownership.</p>

It is the responsibility of the Government of Rwanda through Rwanda Biomedical Center-Single Project Implementation Unit for the application of this ESMF and ensure compliance to all relevant WB ESF E&S standards and other applicable regulations and guidelines.

The main responsibilities of RBC include but are not limited to:

- Take overall responsibility of ensuring that the mitigation measures proposed in the ESIA/ ESMP and CESMP are implemented,
- Periodic monitoring and surveillance of all project’s investment to ensure compliance with the mitigation measures as set out in the ESMPs and other contractual requirements,
- Ensure a functioning grievance redress mechanism and follow-up all environment and social issues raised,
- Share the monthly and quarterly monitoring reports with the Bank, and
- Report immediately to the World Bank upon occurrence of any significant environmental, social or health and safety incidents.
- Ensure that all required permits/certificates/documents are offered by relevant authorities before starting activities. These are construction permits, ESIA certificates, Occupational permits, etc; where required.
- Comply with the requirements and measures described in subproject site specific ESIA/ESMP.
- Comply with the requirements of the LMP for the project and include the agreed measures in the subproject specific ESIA-ESMP. Supervise and ensure that

bidding documents and contracts are aligned and implemented in accordance with these requirements.

- Ensure consultations, communications and stakeholder participation in all project activities are adhered to in line with the SEP for the project.
- Comply with the ESCP and other agreed measures and actions to ensure proper management of environmental and social issues following the mitigation hierarchy.
- Ensure compliance with the provisions of the Gender Action Plan and ensure promotion of gender equality and fight against GBV during project implementation.
- Ensure that environmentally sensitive areas, cultural and historic sites, restricted or disputed lands are taken care of with appropriate mitigation or compensation measures prior to implementation of activities on them.
- Ensure proper planning for development of E&S instruments, works and budget allocation and monitoring the compliance.
- Ensure early onboarding staff for E&S and EHS implementation and reporting.
- Prepare and implement capacity building training plans for various project stakeholders as per the requirements of the ESMF and other E&S management documents.
- Periodically host stakeholders' engagement meetings to ensure their involvement in planning, implementation and monitoring of each sub-project activity.
- Ensure that procurement documents are reviewed by the Environmental and Social Management staff to ensure that they capture E&S aspects and are cost by contractors.
- Disclose the developed E&S documents (ESIA/ESMP, etc) to the general public to comply with the requirements of ESS10.

As the framework documents (ESCP, SEP and LMP) have been developed and disclosed, the next sections describe in detail the sub-project environmental and social management procedures that RBC will have to pursue to comply with the requirements of the ESF, ESCP and SEP.

More detail for each stage is provided below:

a. Subproject E&S Screening

- General

The main purpose of the Environmental and Social screening is to detect potential environmental and social risks (e.g., pollution, displacement or land acquisition, labor safety, GBV risks, etc) and recognize sensitive sites that may be affected by the project activities. As output, it supports decision-making on the level of environmental and social assessment needed during implementation (e.g., ESIA or ESMP).

The screening process will provide a mechanism for ensuring that potential adverse environmental and social impacts and risks of the HEPRR sub-projects are identified, assessed, and mitigated as appropriate to comply with national ESIA requirements (M.O No. 003/MoE/25) and the WB ESSs.

As a first step of the screening process, all proposed activities will be reviewed to ensure that they are within the boundaries of the Project's eligible activities, and they are not considered as activities listed on the E&S Exclusion List.

As a second step, Rwanda Biomedical Center, in collaboration with other stakeholder institutions will use the E&S Screening Form outlined in *Annex 1* to identify and assess relevant environmental and social risks specific to the activities, and identify the appropriate mitigation measures. The Screening Form lists the various mitigation measures and plans that may be relevant to the specific activities (such as the Environmental and Social Codes of Practice, the Environmental and Social Management Plans, Health and Safety Procedures, anti-GBV action plans, Labor Management Procedures, Chance Find Procedures, Waste Management Plans, etc.) RBC will also identify the documentation, permits, and clearances required under the government's Environmental Regulation. In the screening stage, RBC_SPIU E&S staff will be in close collaboration with Rwanda Environment Management Authority and RDB in assessing the requirements of the ESIA certificate when requested.

- Context-specific screening guidelines for the One-Health Level 3 Biosafety laboratory

These guidelines are tailored to local epidemiological risks, facility scope and the types of samples to be handled within the laboratory while aligning with international standards. The screening protocols are essential for biosafety, biosecurity, and workers' protection. The general objectives for screening in a level-3 biosafety lab are to prevent accidental exposure and/or spread of Risk Group 3 pathogens, to ensure that staff are highly skilled and competent to work in high-

containment conditions, to early detect zoonotic threats from human, animal, or environmental samples, to screen for comorbidities or colonization that could increase health risks to staff.

This specific screening process is conducted on;

- Staff before employment where they are screened for medical fitness, immunity level, psychological fitness and immunocompromising conditions
- Sample Screening for animal, human and environmental samples
- Facility access and Operational Screening that consists in authorized access screening where badges, entry logs and biometric systems are recommended to limit access to only authorized personnel; equipment and procedures screening for calibration and validation as well as ensuring that control measures are in place respectively.
- Visitor & Contractor Screening to restrict access to non-containment areas and allow access in other areas only when guided by facility staff. In any case, basic biosafety training will have to be delivered prior to entering the facility and the required PPEs will be worn.

b. Subproject Formulation and Planning – E&S Planning

Environmental and Social Planning is an important phase in the project lifecycle as it involves identification, management and integration of environmental and social considerations into project design to guide implementation and operation and ensure compliance with legal, regulatory and policy frameworks and thus sustainability of interventions.

The main objectives of an E&S planning are to ensure compliance to applicable laws, regulations and guidelines/standards of both the government of Rwanda and World Bank, enhance stakeholder trust, accountability and transparency, prevent/reduce harm to the community and the environment, and ensure social inclusion that leads to ownership and sustainability.

Based on the outcomes of the screening process above, the Single Project Implementation Unit within Rwanda Biomedical Center will adopt the recommendations and develop the necessary environmental and social management documents at project level or site-specific environmental and social management plans. If the site-specific ESMPs are necessary, the RBC-SPIU, under the support of the WB E&S team, will develop ToRs for hiring a consulting firm to develop them and other applicable plans and forms as needed.

Through stakeholder consultations, the draft ESMPs from consultants will be shared for inputs and comments and finally shared to the WB E&S team for final review and clearance prior to their disclosure and implementation. Consultations will also be held with the concerned communities. If certain sub projects or contracts are being initiated at the same time or within a certain location, an overall ESMP covering multiple subprojects or contracts can be prepared. Some moderate risk subprojects will also benefit from the preparation of a site-specific environmental and social assessment prior to the preparation of an ESMP.

The RBC-SPIU shall ensure that all documentation is complete, permits and clearances required under the government's Environmental Regulation are availed before beginning any project activities.

At this stage, the RBC-SPIU Environmental and Social specialist staff who will be working on the various subproject activities on a daily basis will have been capacitated with technical skills to ensure a smooth implementation of all the measures captured in the environmental and social management plans relevant to the activities.

The E&S risk management staff from RBC-SPIU shall also ensure that all selected contractors, subcontractors, and vendors understand and incorporate environmental and social mitigation measures relevant to them and have in place guiding operating procedures for civil works, accidents monitoring, waste management, noise and air pollution monitoring, etc. Awareness training sessions to selected contractors' workers will be provided to ensure that they understand and incorporate environmental and social mitigation measures; and plan for cascading training to be delivered by contractors to subcontractors and vendors.

These trainings also will cover other topics aiming at making the workers familiar with filling the required forms and checklist at site level. The RBC shall further ensure that the entities or communities responsible for ongoing operation and maintenance of the investment have received training on operations stage environmental and social management measures as applicable.

As per the requirements of the Stakeholder Engagement Plan, the SPIU-RBC will consult with other stakeholder institutions, either governmental, local districts, Civil Society Organizations, Private sector etc as well as the World Bank team to ensure that the E&S planning is jointly conducted and all the risks and impacts are exhausted and agreed upon in the early project preparation stage. Ideally, institutions like REMA, RDB, MoH, PSF, districts of intervention,

RAB, GMO, community representatives, local NGOs and CSO should be represented in the E&S planning process under the coordination of RBC-SPIU.

Once developed, the ESMPs will be publicly disclosed to the RBC website to ensure that it is accessible by the general public, project stakeholders as well as other interested parties. The World Bank will also disclose the final document to its website. This is to ensure accountability and compliance to the requirements of the national legislation and the WB ESF.

c. Implementation and Monitoring – E&S Implementation

This is done to put into action the environmental and social measures set out in the project planning stage and ensure that negative impacts are avoided, reduced or mitigated and that positive benefits are maximized to the highest extent possible for the community and the environment wellbeing.

During the project implementation stage, the E&S team from RBC-SPIU will conduct regular monitoring activities as per the monitoring indicators, frequency and responsibilities described in the ESMPs.

It will ensure that monitoring practices clearly describe the environmental and social risks identified in the ESMF and will monitor the implementation of proposed mitigation measures as part of regular project monitoring. If there are contractors hired to implement subproject activities, they will be responsible for implementing the mitigation measures in the E&S risk management documents, with RBC-SPIU oversight.

To ensure E&S implementation, the RBC SPIU will:

- Assign responsibilities to different actors: Roles and responsibilities of different stakeholders will be identified and shared within the project team, stakeholder institutions and contractor(s) for E&S implementation.
- Ensure that the contractor has the responsibility to implement the mitigation measures specified in the ESIA/ESMP and on the other hand the RBC SPIU will be responsible for checking contractor's compliance with the E&S requirements. Submission of reports to the Bank should be on a quarterly basis and not annually
- Integrate E&S measures into contracts: RBC-SPIU will make sure that E&S requirements are considered in contractors and suppliers' agreements.
- As part of the requirements, Contractors and supervision consultants, where engaged, should be contractually obliged to have in-house staff with suitable EHS competence as

part of their key staff, to support their implementation of the C-ESMPs. And also, to prepare monthly C-ESMP implementation progress reports. Monitoring indicators will be highlighted to help assess the performance and compliance.

- Capacity building: Staff and contractors' workers will be trained on E&S requirements and E&S risk management best practices. A capacity building plan will be developed and implemented at different levels; advanced training, medium and basic/awareness training.
- Implement mitigation measures: RBC will actively carry out actions specified in E&S plans (e.g., dust and noise control, community consultations, relocation and compensation processes where applicable). Additional monitoring plans, guidelines and checklists may be required in this process.
- Public communication: Awareness and other engagement meetings/workshops will be organized to inform and engage with stakeholders and communities on project impacts and mitigation plans. This will be part of information disclosure and will enhance ownership and lead to sustainability of interventions.
- Establish grievance redress mechanism (GRM): this is a structured system used by the project management unit to receive, assess, evaluate and respond to concerns or complaints from project-affected people, workers, or other stakeholders amicably. RBC will ensure accessible and operational channels for receiving and resolving complaints. A GRM will be established at different levels and ensure accessibility of multiple channels to the general public for raising their issues. Specific issues like Gender-Based-Violence will be directly addressed to the Isange One Stop Center.
- Assessment of Gender mainstreaming through project implementation: The economic and social commission of the United Nations defines Gender mainstreaming as “the process of assessing the implications for women and men of any planned action, including legislation, policies or programs, in all areas and at all levels. A strategy for making women as well as men’s concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs in all political, economic and societal spheres so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal is to achieve gender equality” (UN ECOSOC, 1997).

Rwanda prioritizes gender equality and social inclusion mainstreaming as key measures towards sustainable social economic transformation and also aligns with the sustainable development goals principle of leaving no one behind. RBC Social specialist staff will monitor the compliance to the objectives of the GAP for the HEPRR project which are: to guide and facilitate gender

analysis to inform gender responsive designing, implementation, monitoring and evaluation in planned activities; to give due attention to specific needs of men and women, boys and girls among beneficiaries to facilitate ownership and sustainability of implemented activities; to tackle gender-based violence likely to emerge from implementation of some planned activities; and to promote equal participation of men and women, boys and girls as workers and beneficiaries among others.

The monitoring process of E&S measures helps assess the effectiveness of the social and impact mitigation mechanism in place and compliance to the applicable E&S requirements throughout the project lifecycle. The monitoring shall be done internally by the environmental/social specialists from RBC-SPIU through regular site inspections, documents review and periodic progress reports. Methods to use in the monitoring process are checklists developed based on ESMP, LMP, GAP requirements; sampling and testing of air, water, noise, and soil as per the parameter to be monitored; health and safety inspection checklists; collection of community views and feedback; recording and maintaining logs, photos, monitoring data, etc.

External interested parties will conduct monitoring depending on the purpose. These may include individual consultants and regulatory bodies as auditors and inspectors as per the requirements of the awarded environmental permits and licenses. The last stage of an E&S implementation and monitoring is reporting where a progress status, monitoring results, non-compliance incidents and their containment measures put in place, updates on conducted stakeholder engagements, best practices and lessons learnt are documented and shared with relevant authorities.

At a minimum, the monitoring reporting will include (i) the overall implementation of E&S risk management instruments and measures, (ii) any environmental or social issues arising as a result of project activities and how these issues will be remedied or mitigated, including timelines, (iii) Occupational Health and Safety performance (including incidents and accidents), (iv) community health and safety, (v) stakeholder engagement updates, in line with the SEP, (vi) public notification and communications, (vii) progress on the implementation and completion of project works, and (viii) summary of grievances/beneficiary feedback received, actions taken, and complaints closed out, in line with the SEP.

Reports from different sites will be prepared by E&S or EHS field staff and submitted to the RBC-SPIU at the central level, where they will be aggregated and submitted to the World Bank on a quarterly basis as a requirement of the ESCP.

Throughout the Project implementation stage, the RBC will continue to provide training and awareness raising to relevant stakeholders, such as staff, selected contractors, and communities, to support the implementation of the environmental and social risk management mitigation measures. Areas of focus for initial training are proposed below, in Section 6.3. The E&S staff from RBC-SPIU will also track grievances/beneficiary feedback in line with the SEP during project implementation to use as a monitoring tool for implementation of project activities and environmental and social mitigation measures.

Lastly, if the environmental and social risk management staff from RBC are informed of a serious incident that occurred during project implementation, which may have significant adverse effects on the environment and the surrounding community, the general public or workers, it shall be immediately notified to the World Bank within 48 hours of becoming aware of such incident to take action. A fatality is automatically classified as a serious incident, as are incidents of forced or child labor, abuses of community members by project workers (including gender-based violence incidents), violent community protests, or kidnappings.

d. Review and Evaluation – E&S Completion

The Review and Evaluation stage is the final assessment of how well a project has been implemented in relation to environmental and social commitments made in the planning phase. It ensures that all mitigation measures were properly carried out and that no significant adverse impacts remain unresolved. It aims at confirming that the project has complied with environmental and social obligations, evaluating the effectiveness of mitigation measures and stakeholder engagement and identifying lessons learnt for future project phases.

Upon completion of each subproject activity, the RBC-SPIU E&S team will review and evaluate progress and completion of project activities and compliance to all required environmental and social mitigation measures. Especially for civil works, the Environmental and Social Specialists will monitor activities with regard to site restoration and landscaping in the affected areas to ensure that the activities have been done to an appropriate and acceptable standard before closing the contracts, in accordance with measures identified in the ESMPs and other monitoring plans.

The sites would have to be restored to at least the same condition and standard that existed prior to commencement of works. Any pending issues will be resolved before a subproject is considered fully completed. The risk management specialists will also prepare the completion report

describing the final status of compliance with the E&S risk management measures and submit it to the World Bank.

6.3 Technical Assistance Activities

This refers to the specialized short to medium term support that will be provided to the project management unit to ensure effective implementation of activities, capacity building of staff and stakeholders and sustainability of project interventions. In the context of this proposed health and emergency preparedness, response and resilience project, TA activities will be delivered by experts in different domains. The main objective will be to strengthen systems for project monitoring within RBC-SPIU, provide experts' inputs and skills transfer to stakeholder institutions' personnel to develop all the monitoring tools and ensure they guide the project implementation.

Technical assistance activities will focus on the following; Support in the development or update of national emergency preparedness and response plans, development and/or review of standard operating procedures (SOPs) applicable to different sub projects activities, development and review of waste management protocols for healthcare facilities, including for hazardous and infectious waste, establishment or enhancement of integrated disease surveillance systems (IDSR), engineering and planning assistance for design and rehabilitation of health facilities, advise on climate-resilient and safe designs, including waste and water management as well as energy efficiency designs, development and implementation of E&S management and monitoring tools (ESMPs, Healthcare Waste Management Plans, LMP, SEP, GRM, GBV/SEA risk mitigation, and community health and safety including training to project staff and site workers, strategic guidance for health sector governance, emergency coordination structures (e.g., One Health platforms), and inter-agency collaboration, development of an M&E framework and indicators for project tracking.

Some of these technical assistance activities will be implemented by relevant RBC-SPIU staff, others through consultancy services/studies and others by third-party outsourced contractors with the required technical skills and capacities as acceptable by RBC and the World Bank. The SPIU-RBC will ensure that the consultancies, studies including feasibility studies, capacity building training, and any other technical assistance activities under the Project are carried out in accordance with Terms of Reference acceptable to the Bank, that are consistent with the ESSs. They will also ensure that the outputs of such activities comply with the Terms of Reference. RBC

and the WB will collaborate to ensure that technical assistance experts for specific sub project activities are on boarded to support the SPIU staff.

6.4 Contingency Emergency Response Component

The Contingency Emergency Response Components (CERC) Manual will be developed by RBC in collaboration with stakeholder institutions to give guidance on rapid reallocation of funds in the event of an emergency, such as a disease outbreak, pandemics, natural disasters or chemical/biological incidents. The manual will provide guidelines on eligible activities, procurement, E&S risk management, and reporting during emergency response.

It will also describe the environmental and social risk assessment and management arrangements if the CERC component becomes activated. This may include a dedicated CERC ESMF or an Addendum to this ESMF based on the subproject activities that will be funded under the CERC component. If such additional documentation or revision to documentation is needed, RBC will prepare, consult, adopt, and disclose these in accordance with the CERC Manual, and implement the measures and actions necessary.

Some eligible activities under the CERC are, but not limited to: procurement of vaccines, PPEs, diagnostics, and medical equipment; health facility setup or rehabilitation; capacity development and deployment of emergency medical teams; support to surveillance and contact tracing systems; public awareness campaigns; disposal and treatment of infectious waste; transport logistics for emergency supply delivery, etc. In all these activities under the CERC, an E&S screening is required even if it can be simplified, aligning with national emergency protocols. Technical Assistance to strengthen institutional response capacity on E&S measures will be conducted and the established GRM will be still operational.

6.5 Stakeholder institutions' roles and responsibilities/ESMF Implementation arrangement

The table below summarizes the roles and responsibilities regarding the implementation arrangements for environmental and social management;

Table 6: Summary of ESMF implementation Arrangements

Institution	Relevance to the project
National/Rwanda Biomedical Center (RBC)	<p>The overall responsibility is to execute and manage the project activities on the ground, in line with the objectives and guidelines set by the World Bank; this will be done by:</p> <ul style="list-style-type: none"> -Developing and implementing plans aligned with project strategic objectives. -Providing the necessary resources (equipment, staff, funds) and ensure efficient use. -Monitoring and evaluating project progress and impacts. -Building the capacity of staff and stakeholders on E&S risks and management. -Reporting to the World Bank on project progress (narrative) and fund utilization (financial). -Monitoring and ensure regular compliance with E&S requirements.
Rwanda Environment Management Authority (REMA)	<ul style="list-style-type: none"> -To provide support, oversight to field staff working on environmental and social risk management. -To collect, review, and provide technical inputs to E&S Screening Forms and other monitoring instruments as relevant. -To conduct periodic inspection of the project site to monitor adherence with the ESMP developed during the ESIA process.
Gender Monitoring Office	<p>The Rwanda’s Gender Monitoring Office was established by the law No 51/2007 of 20/09/2007 and its mission is to monitor gender mainstreaming and the fight against GBV/injustices in public, private, civil society and religious institutions. Its role will be to:</p> <ul style="list-style-type: none"> -Monitor compliance with gender-related commitments across institutions. -Ensure respect of regional and international gender-related commitments. -Monitor quality of services for GBV victims and effectiveness of prevention/response mechanisms. -Serves as a reference point for information and documentation on gender equality. -Ensure women and children benefit from project and are protected from discrimination.

Institution	Relevance to the project
	-Conduct awareness campaigns to create opportunities for women’s participation in project activities.
Rwanda Development Board	The mission of RDB is to speed up economic development in Rwanda by enabling private sector growth. For the purpose of this project, RDB will be responsible for issuing the ESIA/ESMP certificates and ensure compliance to its provisions during implementation of the HEPRR project phases.
RBC E&S staff	<p>Fill out the E&S Screening Forms for relevant subproject activities and submit them to the RBC-SPIU E&S staff.</p> <p>Monitor implementation of the site-specific ESMPs for subproject activities and submit reports to the RBC.</p> <p>Ensure that all bidding and contract documents include all relevant E&S management provisions per screening forms and ESMPs.</p> <p>Community awareness and mobilization on E&S risk management</p> <p>Train contractors’ site workers on environmental and social risks and impacts management and implementation measures; Ex: OHS, EHS, GBV, SEA, etc</p> <p>Ensure that the project is implemented in compliance with the WB ESSs and national environmental law as well as other applicable guidelines.</p>
Contractors	<p>Ensure compliance with contract Terms</p> <p>Comply with the Project’s environmental and social mitigation and management measures as specified in ESMPs and contract documents</p> <p>Take all necessary measures to protect the health and safety of workers and community members, and avoid, minimize, or mitigate any environmental harm resulting from project activities.</p> <p>Prepare contractor specific ESMP including OHS plans; waste management plans etc</p> <p>Maintain log on grievances, accidents and incidents on site;</p> <p>Report on E&S issues in the project progress reports</p>
TA Consultants	Ensure that the HEPRR project is implemented in full compliance with national laws and environmental and social safeguards and the WB ESF.

Institution	Relevance to the project
	<p>Enhance RBC’s capacity to integrate, monitor, and report on environmental and social (E&S) aspects of the HEPRR project throughout its lifecycle.</p> <p>Ensure the E&S requirements (e.g., ESMP, ESCP, LMP, SEP, etc.) are integrated into project planning, procurement, and execution.</p> <p>Review and advise on integration of E&S technical clauses in the bidding documents and contracts</p> <p>Provide oversight support to RBC and stakeholder on implementation of E&S risk management measures and provide technical training sessions to staff on reporting to the WB ESSs and national regulations and guidelines</p> <p>Documenting lessons learnt and participate in knowledge sharing events</p>

6.6 Proposed Training and Capacity Building

6.6.1 Institutional Capacity Assessment

To ensure effective implementation of the ESMF and other social management instruments prepared under the HEPRR a strong staff technical capacity is a prerequisite within the project implementing agency and partner institutions. There is a need for a deep understanding of the ESMF to the various technical staff of the coordinating agency and partner institutions as well as key stakeholders involved in the implementation of HEPRR activities.

Capacity building will be integral to support the project teams in understanding their roles in supervision, monitoring, evaluation and environmental reporting on the project activities. Therefore, a special initiative is needed to develop the capacity of the project implementing units, staff from partner institutions and beneficiaries to allow a smooth implementation of the HEPRR project with regard to social and environmental aspects. The next sections outline the capacity building needs of the implementing agency and partner institutions;

6.6.2 Capacity need assessment of the implementing agency on E&S management

RBC as an institution in charge of coordinating the implementation of the various sub-projects’ activities under the HEPRR has the existing capacities and practical experiences that need to be further enhanced. Partner Institutions involved in spearheading the implementation of the various sub-components of the HEPRR includes the Ministry of Health (MoH), RDB and REMA.

The existing capacities and practical experiences of the main HEPRR project implementing and partner institutions namely RBC and the MoH in the area of environmental and social management is evolving which needs to be further strengthened.

RBC has employed one environment specialist and a second social risks management specialist to assist during this project implementation. The Environment Officer is supposed to follow up the E&S issues of all development projects conducted by the RBC, whether it is a construction or other project conducted by the Single Project Implementation Unit (SPIU). Limited institutional and staff capacity in government sector stakeholder organizations collaborating in HEPRR project implementation could affect project implementation as well as ESMF monitoring.

However, the presence of a dedicated environmental and social management personnel adequately trained with the respective relevant specialists at partner institutions REMA, RDB, and other government agencies will support in monitoring the process of environmental and social safeguard management. Existing gaps in knowledge, skills and attitudes at district hospitals, public health offices and health care facilities (HCFs) levels in relation to safeguard issues. In brief, the consultation discussions and assessments held with the institutions have shown that there are capacity gaps in environmental and social management which needs to be filled through deploying adequate human resources and training.

It is recommended that the capacity gap in risk management manpower should be filled in as follows.

- Establish and maintain a Project Implementation Unit with qualified staff and resources to support management of environmental, social, health and safety (ESHS) risks and impacts of the Project including one environmental specialist, and one gender and social development specialist.
- RBC shall assign one E&S focal person to maintain coordination and support E&S implementation of the project.
- Deliver capacity enhancement training for the safeguard professionals in selected areas of safeguard management.
- Deploy the relevant professional staff to monitor the process of environmental and social safeguard management
- Strengthen the institutional capacity of SPIU at RBC.
- Carry out tailored and customized capacity building trainings for grassroots ESMF implementing structures/committees.

- Making periodic assessment and understanding of the root causes of the observed problems and introducing appropriate measures to address them.

6.6.3 Training requirements

One of the capacity building areas for RBC that will implement the HEPRR subprojects is the provision of training. The training to be offered will also need to address target groups from different beneficiary (e.g.: focal persons from regional health sector bureaus & HCFs) and stakeholder institutions (e.g.: RBC & MoH) which will have a role in implementing the ESMF at various levels.

The training is also necessary for high level project coordination and management groups as well as to relevant members of the broader stakeholders to create awareness on environment management aspects of the HEPRR Project. As a result, the type of trainings necessary to these various target groups will vary. RBC shall provide training and capacity building support to Project staff, stakeholders, members of affected communities on the following topics:

- Monitoring and management aspects of environmental and social impact assessment implementation
- Emergency preparedness and response;
- Occupational health and safety;
- Refresher training of staff and cleaners on infectious and biowaste management;
- Develop good practice guides and refresher train staff involved in the use of waste management (for selective sorting, use of bins, equipment, etc.) and display internal waste management procedures;
- Refresher training of laboratory technicians and agents in charge of Biological Waste on disposal, operation, and maintenance of incinerators before their installation.
- Prevention and response to the risks of SEA/ SH and GBV associated with the Project.
- Training of Grievance Redress Committees within the framework of GRM

6.7 Estimated Budget for implementation of ESMF

The budget for implementation of the ESMF will be detailed in the support budget for the Project, with an estimated cost shown in the table below. Detailed costs associated with coordinating the ESMF implementation by the PMU or WB are not fully cost at this stage, it will be fully elaborated in the budget from the project document.

The following table lists estimated cost items for the implementation for the ESMF, which have been included in the overall project budget:

Table 7: Estimated cost items for the implementation of the ESMF

No	Activity	Budget Cost (USD)
1	International and National Consultants to develop framework and site-specific E&S management documents; technical assistance and capacity building of project staff, contractors and site workers	\$950,000
2	Salaries for E&S staff and Technical Assistants for E&S implementation	\$630,000
3	Technical capacity building for implementation of the ESMF	\$450,000
4	Expenses for consultations, workshops and conferences; costs for travel, conference rooms, per diem, mission fees and refreshments	\$600,000
5	Audio-visual & print production expenses; printing of awareness raising materials, grievance management materials, development of data collection tools/ supervision/monitoring/grievance redress	\$300,000
Total		\$2,800,000

The cost for mitigation and compensation measures resulting from the additional social management documents to be developed as results of the screening of sub project activities will be determined and agreed upon between RBC and WB before implementation of those activities. The budget for consultations and workshops will be merged with the set budget for implementation of the stakeholder engagement plan to avoid duplication.

CHAPTER 7. GRIEVANCE REDRESS MECHANISM

7.1. Introduction

This section describes the process of grievance redress mechanism to be used during the project implementation to facilitate the affected stakeholders to solve and manage the complaints. The project will leverage the established grievance redress mechanism in place for WB projects and use it to report, resolve, and/or escalate issues that arose from the project implementation. This mechanism will assist in getting timely resolutions to the identified issues by communities in the vicinity of the project and provide feedback to ensure there is trust between the implementer and the beneficiaries.

7.2. National context of GRM

Project grievance redress mechanism aims to provide accessible and effective ways for individuals to raise concerns and seek resolution for various issues, particularly those related to project activities or community disputes. For the case of Rwanda, the GRM includes traditional systems, like Abunzi committees, as well as more formal, project-specific grievance mechanisms.

For the development projects that require expropriation, the Article 33 and 34 of the Expropriation Law in Public Interest No 32/2015 of 11/06/2015 provides complaints procedures for individuals dissatisfied with the value of their compensation. The Article 33 of the expropriation Law stipulates that dissatisfied persons have a period of 10 days from the application for counter valuation by the person to be expropriated. This application should be done within 7 days after the approval of the valuation report by the expropriator.

7.3. Work-related Grievance Redress Mechanism

This GRM has been detailed in the project LMP, which serves as guiding document for workers management during project implementation. Specifically, there might be complaints arising from the construction site or other field-level locations, which can greatly impact the successful execution of the project activities.

Typical workplace grievances include but are not limited to demand for employment opportunities; disputes on labor wage rates; delays of payment; disagreement over working conditions and occupational health and safety, concerns in the work environment, etc. Therefore,

the contractor, in collaboration with the implementing agency, will establish a committee to handle and resolve grievances raised during the project implementation process at the site level. RBC will ensure that each contractor has established a GRM as part of their C-ESMP.

7.3.1 Principles of workers GRM

- **Provision of information.** All workers should be informed about the grievance mechanism at the time they are hired, and details about how it operates should be available.
- **Transparency of the process.** Workers must know to whom they can turn to in the event of a grievance and the support and sources of advice that are available to them. All managerial staff must be familiar with their organization's grievance procedure.
- **Keeping it up to date;** The grievance resolution process should be regularly reviewed and kept up to date, for example, by referencing any new statutory guidelines, changes in contracts or representation in the GRC.
- **Confidentiality;** The process should ensure that a complaint is dealt with confidentiality. While procedures may specify that complaints should first be made to the workers' line manager, there should also be the option of raising a grievance first with an alternative manager, for example, a human resource (personnel) manager.
- **Non-retribution;** Procedures should guarantee that any worker raising a complaint will not be subject to any reprisal.
- **Reasonable timescales;** Procedures should allow for time to investigate grievances fully but should aim for swift resolutions. The longer a grievance is allowed to continue, the harder it can be for both sides to get back to normal afterwards. Time limits should be set for each stage of the process, for example, a maximum time between a grievance being raised and the setting up of a meeting to investigate it. The timelines will be made clear in site-specific E&S documents as well as the C-ESMPs.
- **Right of appeal;** A worker should have the right to appeal to the representative authority or next level CHWs committee if he or she is not happy with the initial responses.
- **Keeping records;** Written records should be kept at all stages. The initial complaint should be in writing, if possible, along with the response, notes of any meetings and the findings and the reasons for the findings.
- **Relationship with collective agreements;** Grievance procedures should be consistent with any collective agreements.

- **Relationship with regulation;** Grievance processes should be compliant with the national labor law and other applicable guidelines.

7.3.2 Composition workers GRC

The project specific GRM will be established at two levels: (1) at the central level in RBC/PMU and (2) at site level. This GRM is not a substitution to the existing Rwandan legal system. However, this is formed to mediate and seek appropriate solutions to labor-related grievances, without escalating to higher stages. At the central level, the members of the Grievance committees include: the SPIU coordinator, the Program Manager for the project, the Environmental Specialist and the Social Specialist. The SPIU Coordinator will seek guidance of the RBC Senior Management and MoH if deemed necessary on the grievance to be handled. At the site level, a GRC will be composed by 2 workers representative who will be the president and the secretary of the committee, site health and safety officer and women and youth representatives.

7.4 General Grievance Redress Mechanism (GRM)

RBC took a decision in 2023 to deploy the existing Community Health Workers (CHWs) framework to take on the additional duties of project Grievance Committees in WB-supported projects. CHW are well-trained individuals established under a legal structure.

The rationale behind this includes the fact that the CHWs are elected by the communities among which they live and are well-trained individuals and are accountable to the villages they serve.

Adopting CHW framework has various benefits including the assurance of legitimacy as well as saving time and resources.

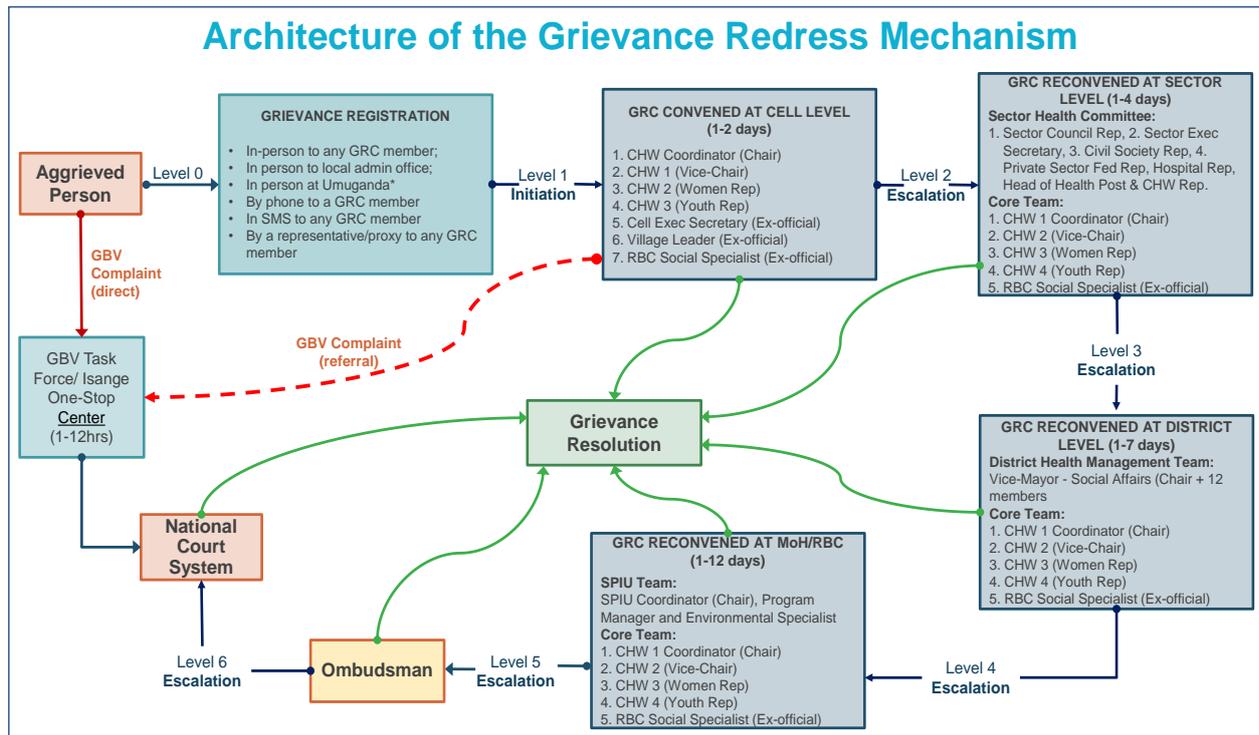


Figure 2: General GRM that uses elected CHWs

Grievance Redress Committees (GRCs) comprise a core team of the cell level CHW Coordinator as the Chairperson and the 3-village level CHW serving as Vice Chairperson, Women Representative and Youth Representative. The committee includes ex-officio members comprising the RBC-SPIU Social Specialist, the Village Leader of the village in which an aggrieved party (complainant) resides, and the Cell Executive Secretary in which the aggrieved party’s village administratively belongs.

The GRC core team escalates the grievance if it is not resolved at cell level to the Health Committee of the sector in which the aggrieved party belongs. The 7-member Health Committee is constituted by the Sector Council representative (a sector is administratively governed by an elected council), the Sector Executive Secretary, the Civil Society representative, the Private Sector Federation representative, the Hospital representative (the hospital in whose catchment the aggrieved party’s Health Centre belongs), Head of the nearest Health Post where the aggrieved party’s residence and the representative of CHWs in the sector.

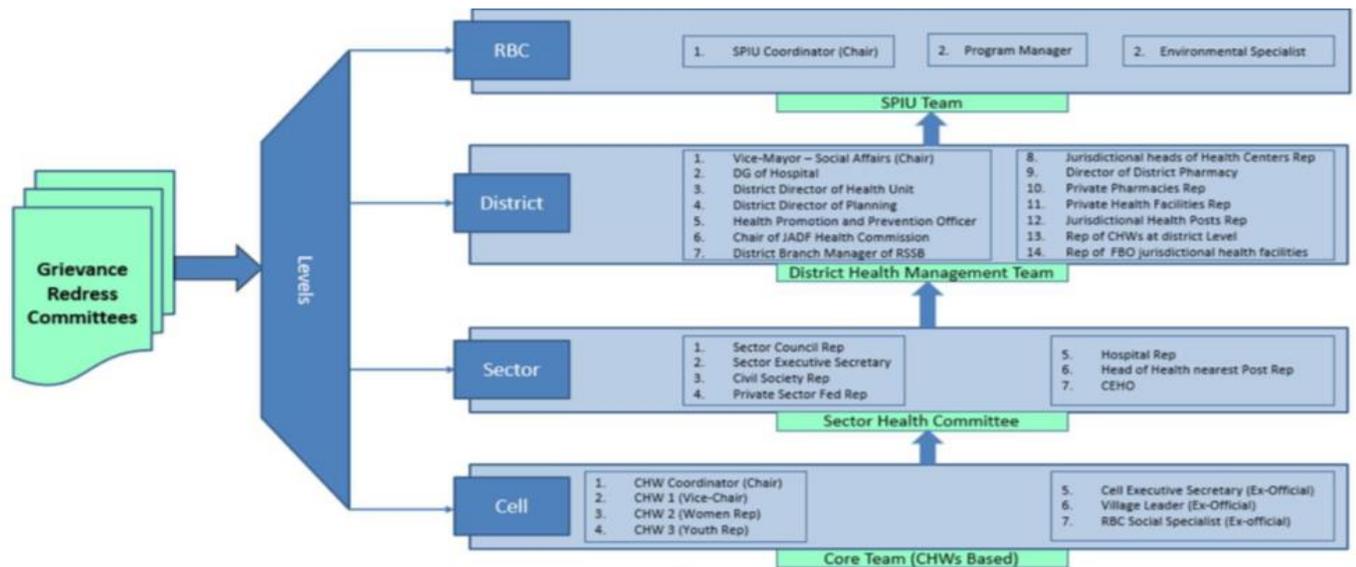


Figure 3: GRC structure to implements the GRM

Core team escalates the grievance to the District Health Management Team (DHMT) if not resolved at sector level. The DHMT comprises 13 members chaired by the Vice Mayor for social affairs. Other members include: The Director General of jurisdictional District/Provincial/Referral Hospital, District Director of Health Unit, District Director of Planning, Health Promotion and Prevention Officer, Chair of Joint Action Development Forum (JADF) Health Commission, the District Branch Manager of the Rwanda Social Security Board (RSSB), the representative of the jurisdictional heads of Health Centers, the Director of the District Pharmacy, the representative of Private Pharmacies, the representative of Private Health Facilities, The representative of the jurisdictional Health Posts, the representative of CHWs at district level, and the representative of the Faith Based Organizations (FBO) jurisdictional health facilities.

Core team escalates the grievance to the RBC-SPIU if not resolved at district level. The RBC SPIU GRC team is described in the above sections. Should the RBC-SPIU fail to redress the grievance, it will arrange for the aggrieved party to approach the Ombudsman and the national court system as appropriate as shown in the escalation flow in *Figure 2*.

7.5 Capacity Building for GRCs

The Project will develop a capacity development plan for GRC members to ensure that they receive adequate training on their roles and responsibilities as well as the overall procedures of

the GRM. Further, the project will ensure that adequate resources are available for operationalization of the GRM, including the offices, log books and they will be given time to meet in working hours when there is a case to discuss.

The GRCs training topics would include regulatory and policy frameworks (Rwanda Labor law, WB ESS and LMP), workers' rights, types of workers' grievances, grievance resolution process (receiving, filing, analyzing and closing or escalation of work-related complaints); dealing with complaints raised by vulnerable workers (including female and young workers of working age, as well as workers with disabilities); grievance reception channels.

On GBV/SEA/SH, there will be a need to ensure that GRM procedures and mechanisms for reporting allegations of GBV/SEA/SH are known to all GRC members.

7.6. Grievance reception channels

Information on the various channels to submit grievances, complaints, and concerns will be publicized through meetings, monthly information brochures and posters explaining the GRM process in languages understood by project affected people who are potential users of the GRM, and through one-on-one meetings during recruitment. Those posters will be displayed in accessible places, and suggestion boxes will be also available in each site's offices. Other RBC's communication channels may be used by complainants to raise their concerns on project activities.

7.7. World Bank Grievance Redress Service

The grievance Redress Service (GRS) is an avenue for individuals and communities to submit complaints directly to the World Bank if they believe that World Bank –supported project has or is likely to have adverse effects on them, their community, or environment. The GRS enhances the World Bank's responsiveness and accountability to the project-affected community by ensuring that grievances are promptly reviewed and addressed.

Communities and individuals who believe that they are adversely affected by a WB supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been

brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond.

For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit, <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service> and information on how to submit complaints to the World Bank Inspection Panel, please visit, www.inspectionpanel.org. The Labor Management Procedures for the HEPRR project will give more details on grievance resolution, membership of the GRCs from site to project level and the escalation levels to ensure that the complainant is heard and his/her concern resolved to the highest level of satisfaction.

CHAPTER 8. STAKEHOLDER ENGAGEMENT, CONSULTATION AND DISCLOSURE

8.1. Introduction

This section implies the public consultation after mapping and identification as well as the methods used during engagement process, their views and outcome have been considered and the separate Stakeholder Engagement Plan (SEP) has been developed for the Project, based on the World Bank’s Environmental and Social Standard 10 on Stakeholder Engagement. The SEP can be found here:

https://rbc.gov.rw/fileadmin/user_upload/report_2024/Stakeholder_Engagement_Plan-revised.pdf

For the purpose of developing this ESMF, public consultations were conducted from July 14–18, 2025, across central and decentralized levels. Stakeholders included government ministries, agencies, local governments in nine districts (Kicukiro, Nyaruguru, Rusizi, Bugesera, Kirehe, Rubavu, Burera, Gicumbi, Nyagatare), NGOs, Security organs, civil society, private sector, and local communities. Participants expressed urgency and pledged their support to the project. Consultation will remain continuous throughout design, ESIA development and implementation phases to identify risks, inform communities and strengthen community ownership, transparency, inclusiveness, and responsiveness to local needs and concerns.

8.2. Disclosure of the ESMF

Disclosure of the ESMF shall conform to the public communications policy of the WB, disclosure and exchange of information, which requires that the ESMF document for WB-financed projects be accessible to the interested parties and the public. As soon as RBC receives the cleared ESMF from the development partners, it will initiate the process of disclosure of the ESMF document, arrange communication with stakeholders and conduct public hearings.

8.3. Stakeholders mapping

Project stakeholders include all individuals, groups, or entities directly or indirectly affected by the project (“affected parties”) and those with an interest or influence on its outcomes (“interested parties”).

The HEPRR project stakeholder mapping identified three main categories:

- **Affected Parties** – Groups directly impacted by the project and most vulnerable to its changes. They must be closely involved in identifying impacts and mitigation measures.

Examples: border crossers, women of reproductive age, children, health workers, public health staff, veterinary services, and labs.

- **Other Interested Parties** – Groups not directly impacted but with interests that may be affected or who could influence project implementation.
Examples: general public, private sector federation, religious institutions, academics, national/international health organizations.
- **Vulnerable Groups** – Those disproportionately impacted due to social or economic disadvantage, requiring special engagement to ensure fair representation.
Examples: elderly, people with NCDs, persons with disabilities, refugees, inmates, female- and child-headed households, and poor households.

The project emphasized gender-sensitive engagement, especially for women and children, who may face barriers in accessing services and risk communication. Tailored communication strategies will reduce misconceptions and enhance inclusion.

8.4. Principles of stakeholder engagement

The following are key principles for stakeholder engagement:

- Openness and life-cycle approach: public consultations were arranged in an open manner, free of external manipulation, interference, coercion, or intimidation.
- Informed participation and feedback: information was shared among concerned stakeholders in an appropriate format and stakeholders' feedback were collected.
- Inclusiveness and sensitivity: stakeholder identification was undertaken by supporting better communications and building effective relationships. In particular women, youth and the elderly, persons with disabilities and those with underlying health issues were considered in the conducted consultations.

8.5. Stakeholders engagement methods

Methods used during stakeholder consultation include interviews, focus group discussions (FGD), face-to-face dialogues, and official meetings. These provided feedback on project scope, risks, expected benefits, and mitigation measures.

Feedback received:

- Strong stakeholder support and recognition of project urgency.
- Emphasis on strengthening health facilities, environmental management, and community resilience.

- Need to integrate local socio-economic and environmental benefits.

Overall, consultations demonstrated broad ownership and commitment. Feedbacks from public consultation will inform future ESIA, ESMPs, and other sub-plans. Public participation will remain critical to reducing resistance, ensuring compliance, and achieving effective and inclusive project implementation.

8.6 Public Consultation

The public consultation for this ESMF was carried out at different institutions from central to decentralized level. These include the Government and non-government institutions. At Central level, the engaged stakeholders are relevant Ministries and institutions. At decentralized level, the engaged stakeholders include 9 administrative districts namely Kicukiro, Nyaruguru, Rusizi, Bugesera, Kirehe, Rubavu, Burera, Gicumbi and Nyagatare across 4 provinces of the country and the City of Kigali. and different relevant non-governmental institutions, as well as the local community from 14th to 18th July 2025 see Annex 1 (outcomes stakeholders' engagement and consultation at decentralized level). The results of public consultation showed that this project is urgently needed by the stakeholders. All stakeholders consulted promised to support the project.

At the points of entry, participants in consultations suggested that the project plans to commission a mobile clinic/laboratory for livestock monitoring, especially when there is a cross-border pandemic. They gave the examples of where livestock are put in quarantine without counter-verification if they are affected or not.

The additional consultations, especially with the general public will be conducted in the project lifecycle and mainly after confirmation of all project sites. Consultation was used as a tool to inform the general public, beneficiaries and stakeholders about the proposed activities both before and after the development decisions are made. It assisted in identification of the problems associated with the project as well as the needs of the communities likely to be impacted.

This participatory process helps in reducing the public resistance to change and enabled the participation of the local people in the decision-making process. Initial Public consultation has been carried out with different and relevant stakeholders mentioned above. The views of all consulted stakeholders were considered in preparation of this ESMF and will also be considered in the design of the sub-project activities and project implementation.

Additional consultations are planned during the development and implementation of site-specific E&S management tools. The objectives of those consultations will be to avoid complaints and minimize probable adverse impacts of the project to the community while maximizing its benefits.

Table 8: Summary attendance of stakeholders in consultations at local level

No	District	Male	Female	Total
1.	Kicukiro	11	5	16
2.	Rubavu	11	4	15
3.	Gicumbi	9	4	13
4.	Burera	6	1	7
5.	Bugesera	10	6	16
6.	Nyaruguru	11	4	15
7.	Rusizi	7	3	10
8.	Kirehe	11	2	13
9.	Nyagatare	10	3	13
Total		86	32	118

More details on consultation and stakeholders’ engagement are provided in annex to this ESMF

Table 9: Attendance of consulted stakeholders at central level

No	Stakeholder	Male	Female	Total
1	World Bank Group	1	5	6
2	RBC	1	1	2
3	REMA	1	1	2
4	RDB	1	1	2
5	RAB	3	0	3
6	NCDA	1	0	1
Total		8	8	16

8.7. Feedback from stakeholders’ consultation at central level

Different institutions consulted at central level showed their views vis-à-vis the project being developed. In general, the respondents presented their expectations and their wishes on what can be given a priority during project implementation.

The next paragraphs summarize the findings and recommendations collected during stakeholder consultations:

- At each activity, the PIU was recommended to conduct an ES screening to identify the risks and impacts as well as the level of ES study required; the PIU will also have to develop and implement the ES management plans to guide implementation and operation stages. Periodic inspection/audits/monitoring activities will be conducted to assess the level of compliance to the set mitigation measures in respective plans.
- It was recommended to provide the Capacity building trainings regarding waste management (Incinerators use, liquid waste management, etc) for E&H Officers at respective hospitals as well as community health and environmental health Officers at concerned health centers.
- During operation, it was emphasized that each facility be required to develop and monitor an infection control and waste management plan, especially for contaminated effluents and other medical wastes.
- The PIU to make sure that land acquisition is avoided to the highest extent possible and where avoidance is not possible, to provide fair compensation to the affected people before implementation to ensure compliance with ESS5 of World Bank and the Rwanda Expropriation law.
- The respondents requested scaling up of the project to increase the number of health centers to be upgraded to medicalized health centers.
- Local leaders requested that the project not only considers the health care providers by providing the protective equipment but also, local government officials and any other people who are supposed to play a role during health emergencies.

Note: Details on feedbacks from stakeholder consultations at local level are listed in Annex14.

References

1. 10-year government program: National strategy for health professions development (2020-2030)
2. Environment Law, 2018
3. ESMF for Rwanda covid-19 emergency response project, 2020
4. ESRS Appraisal Stage of HEPRRP of February 2024
5. Good regulatory practices in the regulation of medical products, Annex 11, 2021
6. <https://www.worldbank.org/en/projects-operations/environmental-and-social-framework>
7. Ministerial Order no 003/MoE/25 of 19/08/2025 relating to environmental and social impact assessment, Official Gazette n° Special of 20/08/2025
8. Leveraging the Successful National HIV Control Program for More Impactful Interventions, Rwibasira et al., March 2025
9. National Environment and Climate Change Policy, June 2019
10. National Health Emergency Response Operations Plan, September 2024
11. National strategy for implementation of biosafety framework, September 2020
12. Regulations Governing Recall, Treatment and Disposal of Unfit Regulated Products, Rwanda FDA, 2021
13. Revised Green Growth and Climate Resilient Strategy, September 2022
14. Revised National Gender Policy; Accelerating the Effectiveness of Gender Mainstreaming and Accountability for National Transformation, February 2021
15. Rwanda Expropriation law in public interest, No 32/2015
16. Rwanda Health Sector policy, 2015
17. Stakeholder Engagement Plan of HEPRRP (Revised Version), March 2024
18. WB Environmental, Health, and Safety General Guidelines, 2007
19. WHO good manufacturing practices for pharmaceutical products containing hazardous substances, Annex 3, 2010.
20. WHO Guidance on regulations for the transport of Infectious Substances, January 2021
21. World Bank report on climate risk country profile of Rwanda, 2021

ANNEXES

Annex 1: Template of an E&S Screening Checklist

A. Environmental screening

1. Sub-project/component name:
2. Location:
3. Contact person’s name.....
4. General Description of the sub-project:
 - i. Sub-project objectives:
 - ii. Subproject activities:
6. Baseline Description of affected Environment

i. Physical environment

- soil:
- air:
- water:

ii. Biological Environment

- Habitats:
- Fona:
- Flora:

iii. Socio-economic Environment

- Presence of historical sites:
- Public health facilities:
- Other infrastructure:

8 Identification of Negative Environmental risks and Impacts

Aspects	Yes	No	Scale of impact			Remarks
			High	Medium	Low	
Loss of topsoil?						

Loss of vegetation?						
Risk of water pollution? Wetlands?						
Risk of pollution of wetlands or encroaching wetlands?						
Risk of soil erosion?						
Forest degradation?						
Risk of increased noise due to site construction activities?						
Risk of increased dust and thus air pollution?						
Disturbance of historical or culturally important sites (places of worship, burial sites, monuments etc.)?						
Production of medical waste at Operation?						

9 Summary of possible environmental risks and impacts of the sub-project’s activities

Environmental Impacts	Proposed mitigation Measures

10. Recommendations and Environment and Social Impact Assessment or Environment and Social Management instrument to be developed during implementation of the subproject:

.....

B. Social screening

1. Socio-economic information

What assets would be affected due to sub-project intervention? Fill in **Yes** or **No** as appropriate

- Land:
- Physical structure (dwell in or commercial):
- Trees/crops:

- Natural resources (water bodies/forests/ponds):
- Others (specify):

2. Land

- Land ownership: Is the land public or private?
- Does the sub-project require additional land permanently or on a temporary basis?
- In case of land acquisition, will there be physical or economic displacement of people?
Physical displacement:

Economic displacement:

- What would be the total number of affected households:

3. Will the project implementation result in loss of access to the following?

(Fill in **Yes** or **No** as appropriate)

- Land and or house
- Public services (water, electricity, public latrines, playground, etc.):
- Others (specify):

4. Structure (residential or business)

- Total number of residential structures that would be affected:
- Total number of commercial/business structures that would be affected:

5. Trees and Crops

- Is there any tree or plant that may be affected? Fill in **Yes** or **No** as appropriate:
- Total estimated number of trees:
- Is there any social forestry/plantation project that would be affected?
- Are there any fruit-bearing trees that would be affected?
- Are there any agricultural lands/crops to be included in the subproject area:

If yes, please provide estimated market value of the losses:

- Is there any community resource property that might be affected? E.g. open space, etc:

If yes please describe the community dependency of the resources that would be affected:

.....

6. Beneficiaries

- Who are the beneficiaries of the sub project activities?

● How would they benefit from the subproject? Fill in **Yes** or **No**

Access to infrastructure and services?

Access to services?

Source of income generation?

Are the people/residents ready to cooperate with the project?

Please provide explanatory notes below on overall benefits:

7. Possible social impacts of the sub-project

Social Impacts	Proposed mitigation Measures

8. The Environment and Social Management Plan (ESMP) to be taken during implementation of the subproject.

Recommendations:

E&S instrument to guide implementation:

Prepared by: **Signature:** **Date and time:**

Approved by: **Signature:** **Date and time:**

Annex 2: Indicative outline of an ESIA Report

When the E&S screening reveals that the sub project is of high or substantial risk, an ESIA report is required to guide the implementation by highlighting the mitigation measures to minimize the impacts. Ideally, ESIA's should include the following significant elements (not necessarily in the following order):

(1) Executive summary: that concisely discusses significant findings and recommended actions

(2) Legal and institutional framework: This summarizes the analysis of the legal and institutional framework for the project within which the social and environmental assessment is carried out, including (a) the country's applicable policy framework, national laws and regulations, and institutional capabilities (including implementation) relating to social and environmental issues; obligations of the country directly applicable to the project under relevant

international treaties and agreements; (b) applicable requirements under the WB ESSs and (c) and other relevant social and environmental standards, guidelines and/or requirements. Compares the existing social and environmental frameworks and identifies any potential gaps that need to be addressed.

(3) Project description: Describes the proposed project and its objectives, geographic location, intended social and environmental benefits and infrastructures to be developed if any (e.g., dedicated pipelines, access roads, power supply, water supply, housing, and raw material and product storage facilities), as well as the project's primary supply chain. It gives detailed maps of project sites and the area that may be affected by the project's direct, indirect, and cumulative impacts. (i.e. area of influence).

(4) Baseline data: Summarizes the baseline data that are relevant to decisions about project location, design, implementation and operation and, from which mitigation measures are identified. This section describes relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences; and takes into account current and proposed development activities within the project area but not directly connected to the project.

(5) Social and environmental risks and impacts: Predicts and considers all relevant social and environmental risks and impacts of the project, including those relating to the compliance with the WB ESSs. These will include, but are not limited to, the following:

(a) Environmental risks and impacts, including any material threat to the protection, conservation, maintenance and rehabilitation of natural habitats, biodiversity, and ecosystems; those related to climate change and other transboundary or global impacts; those related to community health and safety; those related to pollution and waste generation; those associated with the use of living natural resources, such as fisheries and forests; and those related to other applicable standards.

(b) Social risks and impacts, including: any project-related threats to human rights of affected communities and individuals; threats to human security through the escalation of personal, communal or inter-state conflict, crime or violence; risks of gender discrimination; chances that adverse project impacts fall disproportionately on vulnerable groups; any prejudice or

discrimination towards individuals or groups in providing access to development resources and project benefits, negative economic and social impacts relating to physical displacement (i.e. relocation or loss of shelter) or economic displacement (i.e. loss of access to assets that leads to loss of income sources or means of livelihood) as a result of project-related land or resource acquisition or restrictions on land use or access to resources; impacts on the health, safety and well-being of workers and project-affected communities; and risks to cultural heritage.

(6) Analysis of alternatives: systematically compares feasible options to the proposed project site, technology, design, and operation – including the "non project alternative" situation – in terms of their potential social and environmental impacts; assesses the alternatives' feasibility of mitigating the adverse social and environmental impacts; the capital and recurrent costs of alternative mitigation measures, and their suitability under local conditions; the institutional, training, and monitoring requirements for the alternative mitigation measures; for each of the alternatives, quantifies the social and environmental impacts to the extent possible, and attaches economic values where feasible.

(7) Mitigation Measures: Inclusion or summary of (with the attachment of full) Environmental and Social Management Plan (ESMP). The ESMP identifies mitigation measures required to address identified social and environmental risks and impacts, as well as measures related to monitoring, capacity development, stakeholder engagement, and implementation action plan. It further highlights the monitoring indicators, monitoring frequency and finally estimates on the ESMP implementation budget, attributing the responsibilities to implementing agencies.

(8) Conclusions and Recommendations: Succinctly describe conclusions drawn from the assessment and provide recommendations.

(9) Appendices: (i) References – setting out the written materials, both published and unpublished, that have been consulted; (ii) Record of meetings, consultations and surveys with stakeholders, including those with affected people and local NGOs. The record specifies the means of such stakeholder engagement that were used to obtain the views of affected groups and summarizes key concerns and how these concerns were addressed in project design and mitigation measures; (iii) Tables presenting the relevant data referred to or summarized in the

main text; (iv) Attachment of any other monitoring tools like the operation procedures, checklists, etc; (v) Samples of reporting formats.

Annex 3: Indicative outline of an ESMP Report

An ESMP may be prepared as part of the Environmental and Social Impact Assessment (ESIA) or as a stand-alone document for activities that entail moderate and/or low risks and impacts.

The content of these site-specific ESMPs should address the following sections:

(1) Mitigation: Identifies measures and actions per the mitigation hierarchy that avoid, or if avoidance is not possible, reduce potentially significant adverse social and environmental impacts to acceptable levels. Specifically, the ESMP: (a) identifies and summarizes all anticipated significant adverse social and environmental impacts; (b) describes with technical details each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; (c) estimates any potential social and environmental impacts of activities and any residual impacts; (d) defines procedures management of impacts and (d) takes into account, and is consistent with, other required mitigation plans.

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

(3) Capacity Development and Training: To support timely and effective implementation of social and environmental project components and mitigation measures, the ESMP draws on the environmental and social assessment of the existence, role, and capability of responsible parties on-site or at the agency and ministry level. Specifically, the ESMP describes institutional

arrangements, identifying which party is responsible for implementing mitigation and monitoring measures (e.g., operation, supervision, enforcement, implementation, remedial action, financing, reporting, and staff training). Where support for strengthening social and environmental management capability is identified, ESMP recommends the establishment or expansion of the parties responsible, the training of staff and any additional measures necessary to support the implementation of mitigation measures and any other recommendations of the environmental and social assessment.

(4) Stakeholder Engagement and public consultation: Outlines plan to engage interested and affected stakeholders. It outlines; (a) means used to inform and involve affected people in the assessment process; (b) milestones for consultations, information disclosure, process and channels used; and (c) description of effective processes for receiving and addressing stakeholder concerns and grievances regarding the project's social and environmental performance.

(5) Implementation action plan (schedule and cost estimates): For all four above aspects (mitigation, monitoring, capacity development, and stakeholder engagement), the ESMP provides (a) an implementation schedule for measures that must be carried out as part of the project, showing phases and coordination with overall project implementation plans; and (b) the capital and recurrent cost estimates and sources of funds for implementing the ESMP. These figures are also integrated into the project's overall planning, design and implementation budget.

Annex 4: Guidance or framework ESMP for HEPRRP

No.	Potential Environmental & Social Impacts	Mitigation Measures	Responsible Institution for implementing the measures	Responsible for monitoring	Implementation Period	Estimated Budget (USD)
Adverse Environmental Impacts (Construction phase)						
1	Impact of Noise and Vibration on Communities	<ul style="list-style-type: none"> - Maintain equipment and machinery including brakes, mufflers, catalysers and silencers in good running condition, clean (power washed), free of leaks, excess oil and grease - Workers should be sensitized on noise reduction measures - Selecting equipment with lower sound power levels - Installing acoustic enclosures for equipment causing radiating noise - Improving the acoustic performance of constructed buildings, apply sound insulation - Installing acoustic barriers at work sites 	<ul style="list-style-type: none"> - Construction contractor - Construction Supervisor 	<ul style="list-style-type: none"> RBC RSB REMA RDB RURA RNP 	During Construction phase	Part of project construction cost

		<ul style="list-style-type: none"> - If ambient noise-related grievances are received, develop, and conduct a specific noise monitoring program to verify existing problems and evaluate additional actions required. - Avoid using heavy construction machinery during night-time - Carry out regular maintenance on the construction machinery - Select transport routes to minimize noise pollution in sensitive areas - Install noise silencer on the construction machineries 				
2	Impact on Air Quality: Air Pollution due to Dust Generation and exhaust Emissions.	<p>Use of dust control methods, such as covers, water suppression, or increased moisture content for open materials storage piles, or controls, including air extraction and treatment through a baghouse or cyclone for material handling sources, such as conveyors and bins</p> <p>If ambient air quality-related grievances are received, develop and implement an ambient air quality monitoring program to verify</p> <p>Ensure all vehicles have valid inspection certificate issued by RNP</p> <p>Conduct regular maintenance and servicing construction vehicles and machinery to minimize air pollution.</p>	Construction Contractor Construction Supervisor	RBC RSB REMA RDB RURA RNP	During Construction phase	Part of project construction cost

		<p>Minimize unnecessary idling of running diesel engines of machinery, vehicles and equipment.</p> <p>Limit the speed of vehicle movements to minimize dust</p> <p>Increase moisture content for open materials storage piles,</p> <p>Ensure a site-specific Traffic management plan is in place for the transportation of granular material from existing quarries to the work sites.</p>				
3	<i>Waste generated from construction activities</i>	<p>-Provide solid waste collection dust bins</p> <p>- apply the 3R principles of waste management (reuse, recycle, and reduce) to manage the generated waste</p> <p>- contractors must have a signed contract with an independent and licensed waste collector to collect waste from site</p> <p>- properly segregate and dispose of waste to encourage reuse and recycling of some useful waste materials</p> <p>-Do not mix hazardous waste with other waste generated and must be managed as per hazardous waste management and control proclamation.</p> <p>-Wastes must be properly transported and disposed of to the approved dumpsite or land fill site</p>	Contractor Supervisor	RBC REMA RDB RURA DISTRICT	During Construc tion phase	Part of project constructi on cost

		<p>-Segregate and store hazardous waste in containers or specialized leak-proof plastic bags</p> <p>- Never dispose used oil and filters to the ground, use leak proof containers</p>				
4	<i>Soil pollution</i>	<p>Top soil excavated should be stockpiled in appropriate area for future greening and rehabilitation in the same excavated area</p> <p>Restore the rich nutrient topsoil to its original level upon completion of construction works</p> <p>The topsoil should be uniformly spread onto areas to be rehabilitated</p> <p>As much as possible, use existing access roads</p> <p>As much as possible locate access roads out from farm fields and should be rehabilitated once their use is completed.</p> <p>Avoid the spillage of oil from machinery to the soil</p>	<p>Construction Contractor</p> <p>Consultant Supervisor</p>	<p>RBC REMA DISTRICT</p>	<p>During Construction phase</p>	<p>Part of project construction cost</p>
5	<i>Risk of land degradation due to construction material extraction</i>	<p>-The contractors will be advised to use the existing borrow pits and quarry sites approved by the competent authority.</p> <p>-Select appropriate low-impact extraction methods (e.g.</p>	<p>Construction Contractor</p> <p>Consultant</p>	<p>RBC REMA DISTRICT RDB</p>	<p>During Construction and operation</p>	<p>Part of project construction cost</p>

		excavation and quarrying) that result in final site contours supportive of habitat restoration principles and final land use. -Topsoil should be removed appropriately and stored for later use during site reinstatement, -The contractor should develop and implement the site rehabilitation plan	Supervisor	RMB	phase	
6	<i>Risk and of workforce and Community HS due to construction activities (Accidents/incidents, diseases contamination, labor influx, etc.)</i>	-The contractor and client must conduct training for the community and workforce -The contractor must have all-site insurance -Conduct awareness raising and sensitization activities among workers, on transmission prevention of HIV/AIDS, STDs and communicable diseases -Distribution of condoms and IEC materials and handwashing stations, PPEs, - signing of a code of conduct for all workers - avail first aid kits on site and the trained the first aider ensure the establishment and operationalization of GRCs among workers and community	Construction Contractor Consultant Supervisor	RBC DISTRICT Intervening district hospitals/IS ANGE OSC RIB RNP Community health workers	During Construc tion phase	Part of project constructi on cost

		<ul style="list-style-type: none"> - ensure the contractor comply with the Rwanda labor law and domestic & World bank occupation health and safety procedures - Ensure the implementation of GAP - Ensure the provision of training and awareness on GBV, SEA, and SH - Provide awareness on child/forced labor 				
<i>Adverse Environmental Impacts (Operational phase)</i>						
7	Impacts of Hazardous Waste from collaborative surveillance and laboratory diagnostics activities HEPRR subproject activities could lead to an increase in the generation of infectious waste	<ul style="list-style-type: none"> - Health care facilities should establish, operate and maintain a medical waste management plan (MWMP) adequate for the scale and type of activities and identify hazards. - Waste should be identified and segregated at the point of generation. - Seal and replace waste bags and containers. - Store mercury separately in sealed and impermeable containers in a secure location. 	Health Facilities District authority	RBC REMA RMS	During Operational phase	Part of project cost

	pharmaceutical wastes chemical wastes					
8	<i>Risks associated with sample collection, packaging and laboratory procedure (Injuries, nosocomial infections, etc.)</i>	<p>-Establish a quality control system for packaging, collection and transportation of laboratory samples following the WHO guidelines on laboratory biosafety guidance.</p> <p>-Ensure that health care workers (specimens use appropriate PPE HCWs) who collect</p> <p>-Ensure that all personnel who transport specimens are trained in safe handling practices and spill decontamination procedures.</p> <p>-Place specimens for transport in leak-proof specimen bags (i.e., secondary containers) that have a separate sealable pocket for the specimen (i.e., a plastic biohazard specimen bag), with the patient's label on the specimen container</p> <p>-Organizing sample management (collection, storage, packaging and transport) in accordance with WHO guidelines.</p> <p>-Sample transportation should not expose transporters to risk either during normal handling or in case of an accident.</p>	Health Facilities District authority	RBC/NRL RMS	During Operation phase	Part of project cost

		- All workers must have health insurance				
9	Occupational Health and Safety Risks during HCF Operations: <i>Health care facilities are potential source of infectious waste and these could lead to unsafe conditions for healthcare staff.</i>	<p>-Ensure the implementation of standard precautions and transmission-based precautions in line with national guidelines for IPC in healthcare facilities considering guidance from WHO and/or CDC infection control,</p> <p>-Update and implement HCF OHS plan and/or emergency response plan,</p> <p>- All workers must have health insurance</p> <p>-Ensure identification of risks (Job Risk Assessment) and institute proactive measures,</p> <p>-Train the healthcare workers on the potential OSH risks</p> <p>-Provision of adequate and required personal protective equipment (PPE) to health workers and enforce on use. This includes single use medical mask, gown, Apron, eye protection, boots or closed shoes.</p> <p>-Provision of a system for disinfection of multi-use PPE if not available.</p>	Health Facilities District authority	RBC/NRL RMS	During Operation phase	Part of project cost
10	E&S risks associated with digitalization and	- Develop guidelines for e-waste management consisting of recovery, re-use, recycling as well as its collection and disposal	Health Facilities	RBC RMS	During Operation	Part of project

	Public Health Emergencies (PHE) information systems: risks from increased generation of e-wastes resulting from expanded use of electronic equipment during operation phases.	mechanisms to be used by all project beneficiaries. - Hang appropriate materials on e-waste management and display in appropriate places of the health facilities - Provide training and awareness on the use of the e- waste management guidelines to project beneficiaries - Collaborate with EnviroServe in terms of contract for e-waste management	District authority	REMA RURA	n phase	cost
11	Risk of biodiversity habitat loss	- Minimize destroying the fauna and flora species in areas around the site that are not needed for the project activities - Offset the cut trees or cleared vegetation - Propose the alternative option in project design, that can minimize the clearing/destroying the biodiversity - Ensure the efficient use of natural resources - Ensure the issuance of licenses/permit for quarry, dumpsite and borrow pit sites before their exploitation	Construction Contractor Consultant Supervisor	RBC DISTRICT RMB RNP REMA RDB	During Construction phase	Part of project construction cost
<i>Adverse Social Impacts/Risks during Construction and Operation Phase of Component 1 and 2</i>						

1	<p>Risk of GBV-Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH)</p>	<p>Training, and sensitization/awareness creation for relevant implementing agencies and Contractors/suppliers/consultants/communities</p> <p>Reduce the risk by promoting mandatory and repeated training and awareness raising for the project workforce about refraining from unacceptable conduct toward local community members, specifically women;</p> <p>Informing project workers about national laws that make sexual harassment and gender-based violence a punishable offence to minimize the risk.</p> <p>Reduce the risk by way of delivery of periodic mandatory training on GBV to all workers, including contractors, subcontractors and primary suppliers, as well as relevant consultants and clients.</p> <p>Hire Gender Experts in the relevant project Implementing agencies.</p> <p>Ensure that Workers sign Code of Conduct (CoC) as a risk reduction measure as part of the employment contract, and including sanctions for non-compliance (e.g., termination); and ensure these codes of conduct are publicly disclosed in local languages and are widely accessible to all workers and all groups</p>	<p>Health Facilities District authority Construction contractor, supervising firm</p>	<p>RBC RNP District hospitals/Is ange one stop center GMO District authority</p>	<p>During construction and Operation phase</p>	<p>Part of project cost</p>
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		<p>of people in project areas.</p> <p>Cooperation with relevant stakeholders as a risk reduction measure, ensure that contractors adopt a policy to cooperate with law enforcement agencies in investigating complaints about gender-related issues</p> <p>Develop and implement a gender action plan</p> <p>Reduce the risk by disseminating information on GBV/SH/SEA reporting procedures for grassroots community structures in the intervention areas</p> <p>Separate living space/toilet/shower facilities for men and women project workforce</p> <p>Policy/strategy and reporting and M&E: develop clear reporting and management procedures for SEA/SH</p>				
5	Risk of Infection and Communicable Diseases	<p>Reduce the risk by implementing best practices for waste management, including proper disposal of hazardous materials.</p> <p>Minimize the risk by developing emergency response plans to address accidental releases of hazardous materials.</p> <p>Mitigate the risk by conducting regular monitoring and reporting to ensure compliance with environmental regulations.</p>	Health Facilities District authority Construction contractor,	RBC RNP District hospitals District authority	During construction and Operation phase	Part of project cost

		<p>Minimize the risk by ensuring that the provision of HIV and AIDS, and other STDs education and information shall form part of the delivery and health care services by all health care providers for project workforce, including migrant workers, the local workforce.</p> <p>Reduce the risk by working closely with respective government departments, local NGOs, and/or faith-based organizations, and local communities involved in HIV and other STDs and reproductive health.</p> <p>Reduce the risk by constantly making Voluntary Counseling and Testing available to the project workforce and community members.</p> <p>Reduce the risk by ensuring that all subproject sites/workplaces make diseases outbreaks emergencies (Mpox, Marburg, etc) information from relevant health agencies readily available to their workforce.</p> <p>Hand hygiene: Implement conveniently located hand washing stations or alcohol-based hand sanitizers at all facilities.</p> <p>Cleaning and disinfection of environmental surfaces.</p>	<p>supervising firm</p>	<p>MINEMA</p>		
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		Personal protective equipment (PPE): Workplaces have a responsibility to provide at no cost suitable and sufficient PPE, conduct training and monitor safe use among its workers				
8	<i>Risk of Child Labor</i>	<p>Provide training to ensure contractors are informed of the legal consequences of child labor to discourage practice.</p> <p>Prepare an LMP which contains risk reduction measures, including terms and conditions of employment and minimum age.</p> <p>Periodic monitoring to ensure that the terms and conditions of all project workers are in accordance with the requirements of national labor law and ESS2 as indicated in the LMP;</p> <p>Reduce the risk by establishing a GRM through which workers will be able to lodge their complaints, concerns, difficulties.</p>	Health Facilities District authority Construction contractor, supervising firm	RBC RNP District authority MIFOTRA NCDA	During construction and Operation phase	Part of project cost
9	<i>Noise disturbance and vibration pollution</i>	<p>Minimize noise and vibration in the project site and surrounding areas through sensitization of construction truck drivers to switch off vehicle engines while offloading materials.</p> <p>Minimize the risk by keeping vehicle speeds low, and horns will not be used while passing through or near the communities, silent zone areas such as hospitals, health centers, schools, churches and</p>	Health Facilities District authority Construction contractor, supervising	RBC RNP District authority REMA RSB	During construction and Operation phase	Part of project cost

		<p>residential areas. Equipment will have exhaust silencers to minimize noise generation.</p> <p>Minimize the risk by ensuring that machinery is kept in good condition e.g. greasing to reduce noise generation from friction of movable parts.</p> <p>As a risk reduction measure, follow up that generator and heavy-duty equipment are insulated or placed in enclosures to minimize ambient noise levels.</p> <p>Minimize the risk by providing construction workers with safety devices for protection of ears (earmuffs and ear-plugs etc.);</p> <p>Minimize the risk by limiting working hours for construction activities</p> <p>Minimize the risk through maintaining liaising with the community; Minimize the risk by putting in place an effective Grievance Redress Mechanism to address the community complaints.</p>	firm			
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10	<p><i>Damage to Cultural Heritage and Historic/Ritual Sites during Expansion/Rehabilitation/Construction/Operations</i></p>	<p>Avoid the risk by conducting cultural heritage assessments of the project site to identify any potential physical cultural resources that may be present in the area.</p> <p>Minimize the risk by training construction workers to recognize the signs of physical cultural resources and understand the importance of protecting them.</p> <p>Minimize the risk by implementing a chance finding procedure</p> <p>Reduce the risk by notifying an institution responsible for culture, religious and historic heritage sites protection and conservation, etc;</p>	<p>Health Facilities District authority Construction contractor, supervising firm.</p>	<p>RBC/RNP District authority MINUBU MWE Institute of National Museums of Rwanda.</p>	<p>During construction and Operation phase</p>	<p>Part of project cost</p>
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Annex 5: Standardized Incident reporting format

To be completed by implementing agency/contractor staff within 24 h of incident/accident

Incident date and time:

Incident's site:

Injured/dead person name:

Address: Phone number:

Male/Female:

Date of Birth:

Incident category:

Category 1: "Minor or negligible, no one was injured"

Category 2: Moderate, injuries with short term impairment

Category 3: Critical/ major, susceptible to lead to serious illness or death

Details of incident:

Who was the injured person?

Injury type:

Does injury require hospital/Physician? Yes: No:

Hospital name:

Address:

Hospital phone number:

Injured person/party signature/ date:/.....

Important notes /
instructions.....

Prepared by: **Signature:** **Date and time:**

Approved by: **Signature:** **Date and time:**

Annex 6: Template for Infection Control and Waste Management Plan (ICWMP)

1. Introduction

1.1 Describe the project components

1.2 Describe the targeted healthcare facility (HCF):

- Type of HCF: **E.g.** general hospital, clinics, inpatient/outpatient facility, medical laboratory or isolation centers;
- Functions and requirement for the level of infection control, e.g. biosafety levels;
- Location and associated facilities including water supply and power supply;

1.3 Describe the design requirements of the HCF, which may include specifications for general design and safety, separation of wards, heating, ventilation and air conditioning (HVAC), autoclave, and waste management facilities.

2. Infection Control and Waste Management

2.1 Overview of infection control and waste management in the HCF

- 2.1.1 Type, source and volume of healthcare waste (HCW) generated in the HCF, including solid, liquid and air emissions (if significant)
- 2.1.2 Classify and quantify the HCW (infectious waste, pathological waste, sharps, liquid and non- hazardous) following WBG EHS Guidelines for Healthcare Facilities). Special attention should be given to the identification, classification and quantification of the healthcare wastes.
- 2.1.3 Describe the healthcare waste management system in the HCF, including material delivery, waste generation, handling, disinfection and sterilization, collection, storage, transport, and disposal and treatment works.
- 2.1.4 Provide a flow chart of waste streams in the HCF if available
- 2.1.5 Describe institutional arrangement, roles and responsibilities in the HCF for infection control and waste management

2.2 Management Measures

- 2.2.1 **Waste minimization, reuse and recycling:** HCF will consider practices and procedures to minimize waste generation, without sacrificing patient hygiene and safety considerations.

- 2.2.2 Delivery and storage of specimens, samples, reagents, pharmaceuticals and medical supplies:** HCF will adopt practice and procedures to minimize risks associated with delivering, receiving and storage of hazardous medical substances.
- 2.2.3 Waste segregation, packaging, color coding and labeling:** HCF will strictly conduct waste segregation at the point of generation. Internationally adopted methods for packaging, color coding and labeling the wastes will be followed.
- 2.2.4 Onsite collection and transport:** HCF will adopt practices and procedures to timely remove properly packaged and labelled wastes using designated trolleys/carts and routes. Disinfection of pertaining tools and spaces shall be conducted. Hygiene and safety of involved supporting medical workers such as cleaners will be ensured.
- 2.2.5 Waste storage:** A HCF should have multiple waste storage areas designed for different types of wastes. Their functions and sizes will be determined at the design stage prior to construction and/or renovation of a HCF. Proper maintenance and disinfection of the storage areas should be carried out regularly.
- 2.2.6 Onsite waste treatment and disposal** (e.g. an incinerator): Many HCFs have their own waste incineration facilities installed onsite. Due diligence of an existing incinerator will be conducted to examine its technical adequacy, process capacity, performance record, and operator's capacity. In case any gaps are discovered, corrective measures will be recommended.
- 2.2.7 Transport and disposal at offsite waste management facilities:** Not all HCFs have adequate or well-performing incinerators onsite. Not all healthcare wastes are suitable for incineration. An onsite incinerator produces residuals after incineration. Hence offsite waste disposal facilities provided by local government or the private sector are probably needed. These may include incinerators and hazardous wastes landfill.
- 2.2.8 Wastewater treatment:** HCF wastewater is related to hazardous waste management practices. Proper waste segregation and handling will be conducted to minimize entry of solid wastes into the wastewater stream. In case wastewater is discharged into the municipal sewer sewerage system, the HCF shall ensure that wastewater effluent comply with all applicable permits and standards, and the municipal wastewater treatment plant (WWTP) is capable of handling the type of effluent discharged. In cases

where municipal sewage system is not in place, HCF should build and properly operate onsite primary and secondary wastewater treatment works, including disinfection. Residuals of the onsite wastewater treatment works, such as sludge, should be properly disposed of as well. There are also cases where HCF wastewater is transported by trucks to a municipal wastewater treatment plant for treatment.

2.2.9 Management of healthcare workers: (e.g. exposure to infections and diseases, prevention measures, adequate facilities, PPEs, immunizations, exposure control SOP for blood- borne pathogens; appropriate cleaning and waste disposal, hazardous materials, etc.).

3. Emergency Preparedness and Response

Emergency incidents occurring in a HCF may include spillage, occupational exposure to infectious materials or radiation, accidental releases of infectious or hazardous substances to the environment, medical equipment failure, failure of solid waste and wastewater treatment facilities, and fire. In addition, these emergency events are likely to seriously affect medical workers, communities and the environment.

Thus, an Emergency Response Plan (ERP) that is commensurate with the risk levels is recommended to be developed. The key elements of an ERP are defined in ESS 4 Community Health and Safety.

Fire hazard prevention and control plan

As part of the emergency preparedness and response plan, a plan for fire hazard prevention and control for the HCFs and workers have to be integrated. In general, the fire hazard prevention and control plan consist of but is not limited to the following:

- Properly storing flammable materials away from ignition sources and oxidizing materials.
- Awareness to workers on fire risk and precautions to prevent a fire and the action to be taken if fire does break out.
- Providing firefighting equipment such as fire extinguishers etc.

1. Institutional Arrangement and Capacity Building

A detailed institutional arrangement, roles and responsibilities to implement this plan will be included. A training plan with recurring training programs shall be developed. The following aspects are recommended:

- Define roles and responsibilities along each link of the chain along the cradle-to-crave infection control and waste management process;
 - Ensure adequate and qualified staff are in place, including those in charge of infection control and biosafety and waste management facility operation.
 - Task the leadership of a HCF to take overall responsibility for infection control and waste management;
 - Involve all relevant departments in a HCF, and build an intra-departmental team to manage, coordinate and regularly review issues and performance;
 - Establish an information management system to track and record the waste streams in HCF
- Note:** Capacity building and training should involve medical and health workers, waste management staff and cleaners as well as third-party waste management service providers.

2. Monitoring and Reporting

Under supervision of RBC, HCF will put in place protocols and guidelines to track and record the waste streams from the point of generation, segregation, packaging, temporary storage and transport to treatment facilities. The monitoring reports will include reporting accidents and incidents. RBC shall task the HCF leadership to take overall responsibility and coordinate the HCF team to regularly review issues and performance of the infection control and waste management practices in the HCF. Internal and external information sharing and reporting hierarchy will be established.

Annex 7: Description of the proposed BSL3 Lab and Biobank complex

The proposed BSL 3 infrastructure will be designed and constructed in conformity with the Kigali city master plan, at Masaka Medical Hub area.

The proposed building will be divided into two main blocks with a connecting section. A large block will accommodate the main laboratory compartments while the second and smaller block will accommodate offices. The central connecting section will house common facilities like stairs, elevators, toilets, and small conference rooms. The buildings will consider social inclusion such as reserving the spaces for women and access stairs as well as toilets adapted to people with disability. All blocks will be connected on every floor. All Laboratory traffic will be separated from the general traffic, allowing Laboratory professionals to travel back and forth between the main laboratory components and laboratory support spaces without having to cross public areas.

The design and shape of the BSL3 building will take into consideration the maximum and minimum widths of typical laboratory settings and office spaces as well as the surrounding access roads and parking. The Design will also allow for inline, continuous expansion of laboratory rooms and offices. Provisions for parking, sidewalk access, roadway access as well as green area allocation will have to be carefully considered in the design. The Rwanda building code will be consulted to ensure that the design requirements are met.

The complex infrastructure will consist of a BSL-3 laboratory with different compartments and a Biobank facility for collection, storing, processing and managing biological samples such as blood, tissue, DNA and other bodily fluids.

The design of each compartment of the facility will be based on the types of work that will occur in it and risks associated with that work. The design of the laboratory compartment and biobank will follow the criteria, standards and guidelines for biosafety and biosecurity. This will focus on containment equipment and safe methods of managing infectious materials in a laboratory setting.

On the other hand, in order to ensure biosecurity, RBC will develop strict procedures and protocols for limiting unauthorized access to the facilities, samples, research materials and

information during operational phases. RBC will also ensure that all work is performed in a bio-contained environment using appropriate engineering controls.

Biobank Centre: The biobank shall meet international standards. The planned biobank stores leftover specimens with full information collected from health facilities. The biobank infrastructure and storage system will depend on the type of material being stored, the required storage conditions, the anticipated period of storage, and the intended use of the materials, and the storage system is fundamental to maintaining high sample quality.

The data and databases related to biospecimen annotation, quality, storage location, and use, are important attributes of biobank infrastructure. Biospecimen storage infrastructure will have two types of storage systems used for biospecimen storage: ultra-low-temperature with temperature below -80°C (or low-temperature) storage systems and ambient- temperature storage systems (with temperature between -80°C and 0°C).

The general facility design criteria/requirements for biobank include but are not limited to:

- Lockable self-closing doors with windows for viewing the occupants.
- Sinks for hand washing
- Walls painted with washable, hard non-porous paints.
- Bench tops impermeable to water, resistant to heat and any chemicals that may be used in the laboratory.
- Single-pass inward directional airflow
- Spaces between benches, freezer/refrigerators, and equipment would be accessible for cleaning.

Design Requirements of the proposed BSL3 Laboratory and operation Specifications

The BSL-3 laboratory shall be designed, constructed and operated in accordance with guidance for BSL-3 laboratories established by reputable international organizations (CDC 1999, NIH 2001, WHO). The laboratory will be tested for verification that the design and operational parameters have been met prior to operation. To ensure consistency, annual inspection/audits of a BSL-3 laboratory is recommended by the WHO biosafety manual and CDC BMBL.

A. General design and safety requirements for the BSL3 lab

The BSL3 laboratory will consist of an **anteroom** and laboratory rooms. It will have gas-impermeable walls, ceilings and floors. The BSL3 laboratory will be designed for ease of maintenance, so that access to critical mechanical equipment (ventilation ducts, fans, piping, etc.) is outside containment. The laboratory will consist of high-quality room construction with special consideration given to joints, finishes and penetrations. There will be a room for large equipment decontamination.

The room will be capable of being sealed for decontamination with gaseous paraformaldehyde and must have a connection to the HVAC exhaust system. All shutoffs (steam, water, natural gas) will be external to containment.

All heavy fixtures and equipment (e.g. biological safety cabinets, autoclaves, freezers, incubators, etc.) will be fitted with a seismic anchoring system/device engineered to withstand vibrations. Work surfaces, floors, walls and ceilings will be designed, constructed and finished to facilitate easy cleaning and decontamination. The laboratory will be located away from public areas and corridors used by laboratory personnel who do not work in the BSL-3 laboratory. The BSL3 must pass third-party inspection and tests to verify that design and operational parameters have been met.

B. Specific design and operation requirements for the lab compartments

● Anteroom Specifications

The anteroom of the lab will have two doors to access the laboratory. Anteroom doors will be interlocked or alarmed, so only one door may be opened at a time or placed sufficiently apart so that one person cannot open both doors at the same time. Air gaps under doors would be acceptable for directional airflow, i.e., doors are perpendicular to each other and an anteroom is of sufficient size. A manual override would be provided for emergency exit.

The anteroom will have ventilation separate from the laboratory to maintain the containment envelope in the event of a ventilation failure. The anteroom will be large enough to provide storage for clean gowns, laboratory coats, or uniforms that must be donned before entry and be removed before leaving the suite. It also provides space for a log book, wall calendar, and a laundry hamper. The anteroom will have communication capabilities installed. Biohazard

warning symbols, list of personnel authorized, and access rules will be posted on or near the door that can be easily noticeable.

- **Specifications for floors, walls and ceilings**

The BSL-3 lab will be constructed using concrete footing and stem walls with concrete slab-on-grade floors.

Walls shall be steel stud framed and roof construction will consist of metal decking over steel bar joists. The exterior walls will have an application of stucco and the painting of the building would be visually consistent with surrounding structures. The lab floors must be easy to clean, with chemical-resistant flooring (vinyl, or epoxy with fiberglass reinforcement) with a slip-resistant, smooth, hard finish.

For monolithic floors, either a 100-mm-high, readily cleanable, integrally coved sheet flooring base, or a readily cleanable, 100-mm-high, vinyl or rubber base should be used. For epoxy floors, if silicone sealants are used for penetrations, the silicone must be applied after the epoxy has been installed.

Wall/ceiling penetrations will be kept to a minimum and sealed with non-rigid, non-shrinking silicone or latex sealant. The ceiling of the BSL3 lab must be washable and resistant to detergents/disinfectants. Ceiling has to be painted with durable glossy acrylic or epoxy paint.

The ceiling must be of monolithic construction (i.e., gypsum board, not removable tiles).

Justification: Due to the highly pathogenic nature of the microorganisms frequently encountered in BSL3 laboratories, the efficacy of disinfection and decontamination procedures must be ensured without compromising the integrity of the facility. Surfaces that absorb water or degrade in the presence of chemical disinfectants are not suitable for an environment that will be repeatedly exposed to both. Sealed surfaces and floor coving are recommended to reduce the number of cracks or crevices that may harbor microorganisms during application of a disinfectant or decontaminant.

- **Doors**

Lab doors shall be self-closing and lockable. Doors need to be open inward. If sliders are used, they must be made of safety glass and a trackless design should be considered. Door between the anteroom and corridor must have a door sweep for pest control. Door openings should be sized to allow the passage of large equipment. Wall-door frame connection would be made

airtight at time of frame installation. Doors and frames will be of solid finish construction, with the required fire ratings and include panic-hardware, hardware appropriate for high-use and kick plates. Doors would be coated metal which is chemical resistant. Methods for restricting access to only authorized individuals must be put in place. Notices will be posted outside the first door to notify potential entrants of the hazards contained within and measures they must take to protect themselves.

- **Windows**

Windows (safety glass, permanently closed, sealed with silicone or latex sealant) would be installed so that the interior of the adjacent room, except change rooms and restrooms, is visible. Windows must not allow viewing from public areas. Interior sills will be sloped away from windows for ease of cleaning or to minimize dust collection.

Justification: To maintain proper pressure differential and directional airflow, to prevent the movement of aerosols into or outside the laboratory, particularly during space decontamination, to the surrounding spaces or environment, and to assist with pest control.

- **Eyewash/Safety Shower**

An emergency eyewash will be in each BSL-3 room. A combination emergency eyewash/safety shower unit must be in near proximity to places if personnel are exposed to splash hazards (determined during programming). Emergency eyewash and emergency eyewash/safety shower units would be sited and installed. This is because various microorganisms are infectious if exposed to the mucous membranes around the eye. Therefore, eyes shall be flushed thoroughly after splashes and exposures to the eyes.

- **Plumbing**

All penetrations must be perpendicular to the surface and must be sealed to be gas-tight. Penetrations must also be sealed with non rigid, non-shrinking, silicone or latex sealant. All pipes into the BSL-3 laboratories would be secured to prevent movement. Fixtures must be resistant to corrosion of bleach and other disinfectants. Back-flow prevention devices will be installed on all faucets (including industrial water). All pipes will be identified by using labels and tags. Water supply control panel will be located outside the containment area. Plumbing should discharge directly to a sanitary sewer.

- **Sinks**

Hand washing sinks in the lab will be available in each room near exits. Sinks will be hands-free. Infrared sensors are preferable but may not be suitable for all laboratories. In cases where infrared sensors cannot be used, knee-operated sinks are preferable to foot-operated. Each sink will have chemical-resistant traps (for disinfectants), a coved backsplash, a hot-cold water and pre-mixing faucet. Hand washing sink will be accompanied by a paper-towel dispenser and a hands-free soap dispenser mounted within easy reach.

- **Autoclave**

An autoclave in the lab will be equipped with interlocked doors. Decontamination cycles would be determined during programming; gravity and liquid cycles are typical. Appropriate autoclave size requirement should be determined prior to purchase. The body of the autoclave will be located outside containment to provide easy access for maintenance. The floor under the autoclave would be monolithic, seamless, or heat-sealed, coved and water-tight. Exposed pipes would be insulated. The autoclave should be seismically anchored. A curbed corrosion-resistant basin would be installed to prevent leakage. A canopy hood will be provided over the exit door of the autoclave to contain heat and steam. The installation will be signed off by a professional engineer.

- **Fire Safety and alarms**

Fire alarms must be clearly audible above ambient noise. A wall-mounted ABC Dry Chemical fire extinguisher must be mounted near the exit door of the anteroom. Laboratory-safe refrigerators or metal flammable cabinets will be used to store flammable/combustible materials. Alarms will be on UPS power.

- **Vacuum System/Pump**

Vacuum lines will be protected with liquid disinfectant traps and HEPA filters, or their equivalent. Filters will be replaced as needed. An alternative is to use portable vacuum pumps (also properly protected with traps and HEPA filters). If an individual vacuum pump is used, it would be located in the laboratory. Noise and maintenance issues would also be addressed.

- **Electrical requirements**

In the BSL3 lab, emergency power will be provided for HVAC (including controls), alarms, emergency lighting, biological safety cabinets, storage freezers and incubators. UPS power

would be provided to alarms, and to biological safety cabinets. An independent circuit would be provided for each biological safety cabinet. Wall/ceiling penetrations would be kept to a minimum and will be sealed with non-rigid, non-shrinking silicone or latex sealant. Circuit breakers will be located outside containment and are labelled.

- **Heating, Ventilation and Air Conditioning (HVAC) System requirements**

The HVAC system would be Constant Air Volume (CAV). Variable Air Volume (VAV) is not recommended. Electronic direct digital controls are used to manage the system. Recirculation of exhaust air will not be allowed. A dedicated exhaust system is required. The outside exhaust must be dispersed away from occupied areas and air intakes, or the exhaust must be HEPA-filtered. The need for a redundant exhaust fan would be determined by users, to allow continuing work. If the exhaust system fails, the lab must not become positively pressured. Whenever possible, the supply and exhaust fans will be electrically interlocked. Exhaust ductwork will not be positively pressurized.

Supply and exhaust dampers would be gas-tight and closable from outside the facility to facilitate decontamination with gaseous paraformaldehyde. Air supply diffusers will be located so that airflow at the biological safety cabinet face is unaffected (laminar diffusers preferred). Elbows will be limited whenever possible to reduce the amount of background noise generated.

- **HEPA filter**

The HEPA filters in this lab will be "bag-in, bag-out," and the housing accommodates gas decontamination and filter testing (gas-tight dampers and housing). In order to facilitate filter change-out, the HEPA filter housings will not be more than five-feet high. A HEPA could be required on the autoclave exhaust, ultracentrifuge vent and sewer vent. Arrangements will be made to permit periodic leak testing of exhaust system HEPA filters.

- **Laboratory Furniture and Casework**

Furniture and casework in the lab will be sturdy and capable of supporting anticipated loading and uses. In addition, they will be spaced so that areas around and under benches, cabinets and equipment are accessible for cleaning. Benchtops will be impervious to water and resistant to acids, alkalis, organic solvents and moderate heat. They will also have marine/drip edging for spill control. For future flexibility, modular mobile casework will be used.

For storage, closed cabinets will be used rather than open shelving. Chairs and other furniture would be covered with a non-fabric material that can be easily decontaminated. To facilitate cleaning, cabinets/shelves would be made to have angled tops or be built up to the ceiling.

Annex 8: Procedure for handling Risk Group 3 Pathogens

Risk Group 3 (RG3) pathogens require handling in Biosafety Level 3 laboratories due to the risk of severe infection as well as transmission through aerosols. They are microorganisms that can cause serious human or animal disease, may spread to the community, but for which effective treatment or prevention is available. Risk Group 3 (RG3) pathogens' handling requires strict biosafety protocols to protect laboratory personnel, the public, and the environment. These procedures are based on guidance from the World Health Organization (WHO) and the CDC/NIH Biosafety in Microbiological and Biomedical Laboratories (BMBL).

The best practices for handling Risk Group 3 Pathogens includes the following steps:

1. **Checking the Facility Requirements;** this consists in verifying the access control, filtration system in place, presence of waste containment infrastructures (sinks, dustbins, ...), if walls and floors materials can easily be decontaminated.
2. **Personnel Training and Authorization;** only trained(skilled) personnel are authorized to handle risk group 3 pathogens. RBC will make sure that the required staff are trained and assessed on biosafety and biosecurity, emergency response
3. **Selection and commissioning adequate PPEs:** i.e coveralls, respirators, face shield, etc
4. All manipulations involving RG3 agents must be conducted inside a Class III Biosafety Cabinet (BSC).
5. Operational Procedures; the operator must minimize the use of sharps and follow strict sharps handling protocols, label containers with biohazard symbols, update and maintain the laboratory biological materials inventory, decontaminate the surfaces before and after operation, treat and dispose wastes using appropriate methods, update and keep records for sample reception and transfer, report incidents if any and periodically update SOPs and checklists used in the lab.

Annex 9: WHO's classification of Health-Care Wastes

The WHO Safe Management of Wastes from Healthcare Guideline categorizes healthcare waste into two groups as hazardous and non-hazardous wastes, and the hazardous waste is also classified into solid waste and liquid waste.

WHO's Categories of Health-Care Waste

Waste categories	Descriptions and examples
Non-hazardous or general health-care waste	Waste that does not pose any specific biological, chemical, radioactive or physical hazard.
Infectious waste <i>(Including highly infectious waste)</i>	Waste known or suspected to contain pathogens and pose a risk of disease transmission, e.g. waste and waste water contaminated with blood and other body fluids, including highly infectious waste such as laboratory cultures and microbiological stocks; and waste including excreta and other materials that have been in contact with patients infected with highly infectious diseases in isolation wards.
Sharps waste	Used or unused sharps, e.g. hypodermic, intravenous or other needles; auto-disable syringes; syringes with attached needles; infusion sets; scalpels; pipettes; knives; blades; broken glass.
Pathological waste	Human tissues, organs or fluids; body parts; fetuses; unused blood products.
Pharmaceutical waste cytotoxic waste	Pharmaceuticals that are expired or no longer needed; items contaminated by, or containing pharmaceuticals Cytotoxic waste containing substances with genotoxic properties, e.g. waste containing cytostatic drugs (often used in cancer therapy); genotoxic chemicals.
Chemical waste	Waste containing chemical substances, e.g. laboratory reagents; film developer; disinfectants that are expired or no longer needed; solvents; waste with high content of heavy metals, e.g. batteries, broken thermometers and blood pressure gauges.

Radioactive waste	Waste containing radioactive substances, e.g. unused liquids from radiotherapy or laboratory research; contaminated glassware, packages or absorbent paper; urine and excreta from patients treated or tested with unsealed radionuclides; sealed sources.
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Special hazardous waste (waste with high contents of heavy metals)

Special hazardous waste refers to chemical wastes that can pose health problems when they come in contact with people by accidental inhalation, skin contact and/or ingestion.

This includes gaseous, liquid and solid chemicals, waste with a high content of heavy metals such as batteries, pressurized containers, broken thermometers, blood pressure gauges, photographic fixing and developing solutions in X-ray departments, and halogenated or non-halogenated solvents.

Effluents

Effluents are non-chemical liquid wastes that come out of laundry, kitchen, toilet, shower and laboratory rooms which may be contaminated by pathogenic microorganisms. Effluents from isolation wards and medical diagnostic laboratories should be considered as hazardous liquid waste that should receive specific treatment before being discharged into the sewer/drainage system, if such a system exists.

During operation of the BSL-3 Lab and Biobank complex, all wastes generated in the laboratories of the facility (including sample packaging materials, culture materials, petri dishes, PPEs, and associated process wastes) would leave the laboratories only after decontamination using the facility's autoclave or after being chemically sterilized.

For the proposed BSL3 Lab and Biobank complex, clinical waste, sharps, highly infectious wastes, chemical wastes and Effluents are expected to be the dominant wastes to be generated during operation of the laboratory phase. Their quantities will be estimated in the design stage to guide the capacity of the waste management system required for their management.

Annex 10: E&S Screening and Management Framework for the Contingent Emergency Response Component (CERC)

1. Purpose and Objective

This framework provides a structured approach for identification, assessment, and management of environmental and social risks and impacts associated with activities financed under the CERC. It ensures that emergency response investments are implemented in a safe, sustainable, and socially responsible manner, even under urgent conditions.

2. Scope of Application

This framework applies to **all sub-projects and activities financed through the CERC**, particularly during emergency responses triggered by:

- A disease outbreak
- Natural disasters (e.g. floods, earthquakes, pandemics)
- Economic or public health crises
- Other unforeseen emergencies
- It covers:
 - Environmental impacts
 - Social impacts (including gender, livelihoods, displacement, labor conditions, etc.)
 - Compliance with national laws and international safeguards (e.g., World Bank's ESSs)

3. Screening and Approval Process

Site identification and Selection

- Assessment of the proposed site (proximity to populated areas, geological stability, access to emergency services).
- Justification for site choice, including alternatives analysis.
- Buffer zones and containment requirements.

Assessment of biosafety containment measures

- Physical containment features: HEPA-filtered air systems, negative air pressure, sealed surfaces.
- Operational protocols: waste handling, autoclaving, decontamination procedures.
- Access controls and security protocols: restricted entry, surveillance, and secure storage of materials.
- Emergency response plans: for accidental releases, infections, or breaches.

Step 1: Activities Identification

Identify eligible activity based on the CERC Manual or Operational Manual.

Examples: emergency procurement, infrastructure repair, mobile clinics, restoration of livelihoods

Step 2: Preliminary Screening

Conduct **rapid screening** using a standard form/checklist to determine:

- Whether the activity may have E&S risks
- If additional instruments (e.g., ESMPs) are needed and specify them
- If the activity is **ineligible** due to high risk (e.g., large-scale resettlement, protected areas)
- Nature of risks (pollution, labor safety, access restrictions)

Step 3: Environmental and Social Risk Classification

Once the E&S screening is complete, the risks are classified as:

- Low Risk: minor/no impacts; standard precautions apply.
- Moderate Risk: manageable risks with simple mitigation measures.
- High Risk: activity excluded or delayed pending more rigorous assessment.

Step 4: Management Plan Development

If required, prepare:

- Environmental and Social Management Plan (ESMP)
- Abbreviated Resettlement Plan (ARP) or Livelihood Restoration Plan (LRP)
- Labor Management Procedures (LMP)
- Gender Action Plan (GAP)
- Environmental Code of Practice (ECOP) for minor work
- The required checklists to monitor compliance

4. Institutional Arrangements

The CERC will be implemented by Rwanda Biomedical Center in close collaboration with MINECOFIN and other stakeholder institutions.

Required checklists

- Annex 1: Screening Checklist Template
- Annex 2: Environmental Code of Practice (ECOP)
- Annex 3: Sample ESMP Format
- Annex 4: Ineligible Activity List
- Annex 5: Emergency GRM Protocol
- Annex 6: Stakeholder Engagement Brief for Emergency Contexts

6. **Environmental and Social Impact Analysis:** This focuses on energy type and consumption rate, water and waste water management, air pollution, infectious waste, solid wastes, occupational Health and Safety (OHS), community health and safety, stakeholder engagement, monitoring and evaluation.

Annex 11: Chance finds procedure under the HEPRRP

Chance find procedures under Health Emergency Preparedness, Response and Resilience Project (HEPRRP) will be designed as follows:

Immediate 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 present until the responsible local authorities take over.

The Institute of National Museum of Rwanda shall be responsible for significant movable and immovable cultural property that pertains to Rwanda history, heroes and the conservation of historical artifacts and the National Museum shall be responsible for significant movable and immovable cultural and natural property pertaining to collections of fine arts, archaeology, anthropology, botany, geology, zoology and astronomy, including its conservation aspect. Institute of National Museum of Rwanda Cultural Properties Division take over.

The address of Institute of National Museum of Rwanda is as follows:

Rwanda, Huye

Address: SH 1RD 2

P.O.BOX 6397, Kigali

+250730741093

+250783379597

E-mail: info@museum.gov.rw

Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Institute of National Museum of Rwanda Cultural Properties Division immediately (less than 24 hours).

Contact the responsible local authorities and the Institute of National Museum of Rwanda Cultural Properties Division who would be in charge of protecting and preserving the site before deciding on the proper procedures to be carried out. This would require a preliminary evaluation of the findings to be performed by the archaeologists of the Institute of National Museum of Rwanda Cultural Properties Division (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage, including the aesthetic, historic, scientific or research, social and economic values.

Ensure that decisions on how to handle the finding be taken by the responsible authorities and the Institute of National Museum of Rwanda Cultural Properties Division. This could include changes in the layout (such as when the finding is an irremovable remain of cultural or archaeological importance) conservation, preservation, restoration and salvage.

Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Institute of National Museum of Rwanda Cultural Properties Division; and

Construction work will resume only after authorization is given by the responsible local authorities and the Institute of National Museum of Rwanda, Cultural Properties Division concerning the safeguard of the heritage.

These procedures must be referred to as standard provisions in construction contracts, E&S risk management Procedures for Inclusion in the Technical Specifications for Contracts. During project supervision, the Site Engineer in collaboration with the contractor E&S risk management team shall monitor the above regulations relating to the treatment of any chance find encountered are observed.

Relevant findings will be recorded by the E&S team and will be reported in monitoring and Evaluation Report on quarterly basis to the World Bank, and Implementation Completion Report on E&S risk management part will assess the overall effectiveness of the project's cultural property mitigation, management, and activities when the chance find encountered during the implementation.

Annex 12: Environmental, Health and Safety (EHS) clauses for construction contractors

The EHS clauses must be included in the contracts of construction contractors for the HEPRR project to ensure compliance with Rwanda's environmental laws and the WB ESSs, especially SS1, ESS2, ESS3 and ESS4.

Below is a summary of clauses that have to be captured in the contractors' documents:

- **Compliance to community health and safety:** this consists in avoiding disrupting the general public to access public resources like roads, water sources, playgrounds and recreational centers to name a few. It also covers displaying safety signs at the site and training the resource personnel to be in charge of this.
- **Compliance to OHS requirements** like the ones set out in the LMP and ESMF and the OHS plans as well as the national OHS standards and guidelines, provision of PPEs and first aid kits for workers and awareness trainings on emergency and safety.
- **Compliance with Environmental and Social Requirements:** the contractors have to comply with the provisions of the E&S risk management instruments; ESMPs, waste management plans, health and safety plans, national environmental and social protection regulations, ESMF and WB ESSs.
- **Waste Management:** The contractors have to develop a waste management plan to avoid exposure of workers and the community to the impacts of wastes as well as contamination of soil, water and air. In case there is no waste treatment plan in the contractor's site, there will be a must to sign a contractor with waste collection companies certified by RURA.
- **Labor and Working Conditions:** these are the prevention of child labor, SEA, provision of appropriate accommodation to the workers, separate for women and men, provision of safe drinking water at the site, have an operational grievance redress mechanism and well-structured code of conduct and ensure that all workers are aware of them.
- **Non-Compliance and Penalties:** The project developer shall include a close on penalties in case of non-compliance to the above-mentioned technical clauses such as to withhold payments, or terminate the contract for serious or repeated non-compliances.

Annex 13: Templates for quarterly and annual ES performance reports

Sub project title:

Implementing agency/contractor:

Reporting period:

Submission date:

Contact person:

Sub project overview

(Description of activities initiated or completed in the reporting period)

A. Compliance to the WB ESSs

ESSs	Compliance	Recommendations and way forward
ESS1	Assessment and Management of E&S Risks	
ESS2	Labor and Working Conditions	
ESS3	Resource Efficiency and Pollution Prevention	
ESS4	Community Health and Safety	
ESS5	Land Acquisition and Involuntary Resettlement	
ESS6	Biodiversity Conservation	
ESS8	Cultural Heritage	
ESS10	Stakeholder Engagement	

B. Compliance to the E&S Risk management tools' requirements

E&S tool	Status	Observation	Recommendations/way forward
Contractor, C-ESMP			
E&S Staffing			
E&S Reporting			

E&S tool	Status	Observation	Recommendations/way forward
Compliance with labor requirements (provision of signed contracts and code of conduct, implementation of GBV preventive actions, child labor and abuse, etc)			
Compliance with safety requirements (ensure a safe working environment, fully provide PPEs, report on incidences, traffic management) fencing of project site, warning sign posts, traffic signage, firefighting equipment			
Compliance with health requirements (provision of drinking water, mobile toilets, hand washing facilities, exchange rooms)			
Awareness raising on different E&S aspects (H&S, GBV, STDs)			
Waste Management			
Dumping site and Borrow pits, quarry Management			
Water resource management (Water test results and report)			
Air quality management (dust suppression)			
Erosion control plan			

Annex 14: Detailed gap analysis between the WB ESF and National regulations

ESS	WB Requirements	Rwanda Legal requirements	Identified Gap
ESS1	Requires comprehensive E&S risk assessment, including cumulative impacts, indirect impacts, vulnerable groups	The sub project components on construction of Level 3 biosafety lab and biobank as well as upgrading the existing health facilities will undergo ESIA prior to implementation as per the provisions of the ministerial order no 003/MoE/25 of 19/08/2025	For the time being no identified gap as current M.O has integrated the social aspects during ESIA studies
ESS2	Requires Labor Management Procedures (LMP), GRM for workers, protection of vulnerable workers, and prohibition of child/forced labor	The constitution of the GoR prohibits all kind of discrimination, including that of vulnerable groups and women but project-level and worker GRMs are not mandatory under Rwandan law.	The provisions of the WB ESS2 will guide implementation of the project and management of all matters related to workers’ recruitment, contracting and complaints resolution. The LMP will be developed and GRM established and operationalized.
ESS3	Efficient use of water, energy, raw materials; pollution management	The Rwanda Environmental law covers pollution and there are some regulations on waste management and air emissions.	No specific guidelines on the use resource efficient equipment. Where alternatives exist, the most efficient materials will be used, meeting the standard on environmental sustainability and cost minimization. The ESS3 will guide on waste management practices and the required plans and procedures to prevent pollution.

<p>ESS4</p>	<p>Address risks from project infrastructure, traffic, hazardous materials, communicable diseases</p>	<p>Some provisions in national EIA; laws on public health and establishment of Occupational Health and Safety committees at work</p>	<p>The laws do not fully cover project-specific emergency response plans or SEA/SH risks. Although the labor inspectors are mandated to assess the working conditions as well as compliance to workers’ rights, they do not extend to the site surrounding communities. These will be implemented under the guidance of the ESS4 and ESS2.</p>
<p>ESS6</p>	<p>Protection of critical habitats, ecosystem services</p>	<p>Law No. 70/2013 of 02/09/2013 provides the legal framework for the conservation, sustainable use, and fair sharing of benefits arising from biodiversity in Rwanda aligning with Rwanda’s international commitments under the Convention on Biological Diversity (CBD). The No. 001/2019 of 15/04/2019 Establishing the List of Projects Subject to EIA, Instructions for Conducting EIA, and the Institutional Responsibilities includes biodiversity screening.</p>	<p>The ESS6 shall be applied as it emphasizes mitigation hierarchy of avoid, minimize, restore, offset the risks and impacts to biodiversity, including the cumulative impacts and this facilitates implementation and monitoring.</p> <p>The M.O gives in general guidelines for conducting EIA but doesn’t detail the process; this will be defined by the ESS6 during implementation of sub project activities.</p>

ESS7	Requires Free, Prior and Informed Consent (FPIC) where applicable	The constitution of the republic of Rwanda of 2003 as amended in 2015 doesn't treats all Rwandans equally and states that there are no ethnic groups in the country.	The constitution of the GoR will prevail during implementation. No FPIC will be developed through all phases of the project.
ESS8	Protection of tangible and intangible heritage; chance find procedures	Law No. 28/2016 on Cultural Heritage and the M.O on EIA in Rwanda include cultural heritage protection	No formal requirement for developing chance finds procedures on projects in the laws of the GoR. The GoR laws put the responsibilities of protecting cultural heritage to public entities while the ESS8 assigns these responsibilities to the implementing agency as well as to contractors involved in carrying out physical activities.
ESS10	Requires meaningful engagement, SEP, and disclosure throughout the project cycle. It states that consultation is mandatory for all projects and that the SEP must be updated throughout the project cycle. It puts emphasize on consultation of vulnerable groups to ensure that they are not left behind.	Article 20 of the law No. 48/2018 on Environment requires public participation in environmental decision-making. The M.O. No. 001/2019 on EIA requires public consultations during EIA scoping and review. It lacks ongoing stakeholder engagement.	No formal requirement for Stakeholder Engagement Plans (SEP) or ongoing communication in the laws of Rwanda. The ESS10 shall apply as it gives more details and recommends the consultation methodologies as well as the required tools to ensure that the public is engaged and its concerns are addressed in the whole project lifecycle.

Annex 15: Details of outcomes on stakeholders' engagement and consultation at decentralized level

Date/District & venue	Method of consultation and stakeholder	Concerns/recommendations from stakeholders	Responses provided
<p>14/07/2025 Kicukiro District Office</p>	<p>Meeting with District staff Director General of District Hospitals Health Centre</p>	<p>District Executive Administrator (DEA) requested that even if Gahanga and Busanza health Centers will be medicalized, this project should upgrade at least 1 or 2 health posts.</p>	<p>The E&S team responded that HEPRRP will upgrade Gahanga and Busanza health Centers to medicalized health centers located in Kicukiro. Additional scope will be assessed depending on the project budget.</p>
	<p>Managers, PSF Representatives, Representative of Civil Society Organizations and Security organs</p>	<p>BUSANZA HC Manager suggested that the capacity building on diseases prevention should be provided to all stakeholders specifically local community. GAHANGA HC Manager asked whether the project has planned wastes management facilities like incinerators as well as mortuary facilities as part of the package for the HC to be medicalized. The District Animal Resources Officer asked if the project has planned specific awareness on zoonotic diseases and separation of animals' sheds with human habitats.</p>	<p>The E&S team responded that the capacity building for diseases preparedness, response and resilience is planned for all stakeholders under this project. The Environmental and social safeguards project team responded that the wastes that will be generated from project activities will be covered by the project budget. To avail incinerator and mortuary for health centre facilities to be medicalized shall be assessed within the feasibility studies.</p>

Date/District & venue	Method of consultation and stakeholder	Concerns/recommendations from stakeholders	Responses provided
			The E&S team responded that awareness on zoonotic diseases and separation of animals' sheds with human habitats are planned under the project one health approach.
		DASSO Coordinator asked the activities planned by HEPRRP related to eradicating the zoonotic diseases.	The E&S team responded that HEPRRP has planned to procure 4 mobile veterinary clinics and 2 mobile wildlife veterinary clinics as well as human capacity building as measures to control zoonotic diseases
		Director of Health Unit asked whether the project has planned to build isolation rooms of infected patients.	The E&S team responded that the construction of isolation rooms of infected patients will be assessed in project feasibility studies and depending on the availability of project budget.

Date/District & venue	Method of consultation and stakeholder	Concerns/recommendations from stakeholders	Responses provided
<p>15/07/2025 Rubavu District/ Head Office and</p>	<p>Meeting at district office One-to-one consultation at Busasamana HC and the nearby community</p>	<p>The representative of Security organs requested that the project shall not only consider the health care providers by providing the protective equipment but also, local government officials and any other people who are supposed to play a role during health emergencies management including Security organs. The Busasamana health center manager requested if there any new health reporting system that will be developed by the project rather than the existing which is being used by Health care providers?</p>	<p>The E&S team noted the idea and agreed to advocate to the concerned project management The Environmental and social safeguards project team responded that there will be developed reporting templates and channel specific to this project. Furthermore, the team added that the existing reporting system will be strengthened in project component of strengthening the preparedness and resilience of health system to manage health emergencies, especially on sub component of information system for health emergencies,</p>
		<p>The registered midwife at Busasamana Health center wished that the medicalization of Busasamana Health shall also provide the HC fencing for the security of the of Health center. He also advised to establish the shaded pedestrians' ways inside the</p>	<p>The E&S team noted the idea and promised to advise the design team to consider the suggestion</p>

Date/District & venue	Method of consultation and stakeholder	Concerns/recommendations from stakeholders	Responses provided
		health center services	
		The health prevention and diseases prevention officer asked if apart from health emergencies to be considered in this project, will other diseases be also considered in this project?	The E&S team responded that the project has only the scope of managing health emergencies. The team added that the MoH/RBC have other measures to manage other diseases
		The consulted team wished that there shall be a special consideration for Rubavu borders due to a huge number of passengers crossing these borders	The E&S team noted the idea and promised to advocate to the concerned project management
		The consulted team requested that there shall be a special consideration for Rubavu district in this project during the distribution of project planned ambulances	The E&S team noted the idea and promised to advocate to the concerned project management
16/07/2025 Nyaruguru District/ Head Office	Meeting District staff, Director General of District Hospitals, Health Centre Managers, PSF	Representative of Security Organs suggested that, apart from official borders, the non- gazetted borders (ibyambu) shall be also considered in this project (HEPRRP) for effective management of health emergencies	The E&S team noted the idea and responded that the possibility of considering this suggestion will be assessed in project feasibility studies.
		District Health and Sanitation Officer asked whether the project will provide the capacity building on diseases prevention to all	The E&S team responded that the capacity building for diseases preparedness, response

Date/District & venue	Method of consultation and stakeholder	Concerns/recommendations from stakeholders	Responses provided
		<p>stakeholders specifically local community.</p> <p>District Gender Monitoring Officer proposed that research for all wildlife animals and caging (fencing) where possible should be carried out before the disease outbreak.</p>	<p>and resilience is planned under the project activities.</p> <p>The E&S team responded that samples from animals will be collected and Transferred to Biosafety laboratory-level 3. The later will be constructed under HEPRRP for research purposes under one health approach. RDB will be involved in project activities and will provide technical expertise in assessing possibilities of constructing cages/fences to prohibit direct contact of wild animals and local community.</p>
<p>16/07/2025 Rusizi District/ Head Office</p>	<p>Meeting with District staff, DG of District Hospitals, HC Managers, PSF</p>	<p>Mayor of Rusizi District appreciated the HEPRR Project and illustrated that Rusizi district has many borders with big traffic namely Rusizi I, Rusizi II, Bugarama/Ruhwa & Kamanyora and 168 non- gazetted borders, he has also showed that air traffic (Kamembe airport) is increasing in Rusizi. Therefore, HEPRRP should construct diseases control facilities</p>	<p>The Environmental and social safeguards project team responded that borders are under the scope of HEPRRP. The team has as well noted the idea of including the non-gazetted borders which will be assessed during project</p>

Date/District & venue	Method of consultation and stakeholder	Concerns/recommendations from stakeholders	Responses provided
		<p>at both land borders and airports.</p> <p>Also, the Mayor, mentioned that Rusizi has two National Parks namely Nyungwe and Cyamudongo rich in both fauna and flora biodiversity, then HEPRRP shall provide the capacity building of parks guards as well as local citizens in order to provide them with acquired skills for zoonotic diseases control.</p>	<p>feasibility studies. The E&S team responded that the capacity building for diseases preparedness, response and resilience is planned for all stakeholders including parks guards as well as local community.</p> <p>The same issues of non-gazetted borders were raised by all country's bordering districts and the same responses were provided.</p>
		<p>Manager of Nkombo Health Center said that this HC serves more than 19,504 patients but this HC is challenged with the difficulty in transferring patients to Gihundwe Hospital due to its location on island (ikirwa), he therefore requested for a mechanized boat to serve as an ambulance for this transfer.</p>	<p>The Environmental and social safeguards project team recorded the idea. but also, the team responded that the possibility to address the issue will depend on the budget availability</p>
		<p>DG/Gihundwe Hospital suggested that HEPRRP shall help Gihundwe and Mibirizi hospitals to improve health service delivery in emergency cases especially in disease outbreak.</p>	<p>The E&S team responded that this shall be assessed by the time of identifying and distributing ambulances planned in this project. Also, the team added that this will depend on budget availability.</p>

Date/District & venue	Method of consultation and stakeholder	Concerns/recommendations from stakeholders	Responses provided
<p>17/07/2025 Gicumbi District/ Head Office Gatuna border</p>	<p>Meeting One-to-one consultation</p>	<p>The District Director of health unit claimed and strongly requested that the MULINDI health Centre of KANIGA Sector shall be selected to be among HCs which will be medicalized.</p>	<p>The Environmental and social safeguards project team noted the idea and agreed to advocate to the concerned project management</p>
		<p>The Gatuna Border Manager and DG of Byumba level 2 teaching Hospital requested that staff at Cross border facilities be considered exceptionally by giving them different opportunities in order to retain them in that working area.</p>	<p>The Environmental and social safeguards project team noted the idea and agreed to advocate to the concerned project management</p>
<p>17/07/2025 Bugesera District/ Head Office</p>	<p>Meeting with District staff, DG of District Hospitals, HC Managers, PSF</p>	<p>Vice Mayor/Social Affairs and Security organs of Bugesera appreciated the project and asked the project lifetime The and suggested that through the HEPRRP, RBC shall particularly collaborate with the Rwanda Correctional Services (RCS) to address an issue of Correction Facilities/Prisons that are located in diseases hotspots areas.</p>	<p>The Environmental and social safeguards project team responded that HEPRRP will be implemented within 5 years.</p>

Date/District & venue	Method of consultation and stakeholder	Concerns/recommendations from stakeholders	Responses provided
		<p>She added that there is an increase of population influx in Bugesera District due to many development projects including Bugesera International Airport. this is a challenge to Health centers which cannot easily serve this high number of patients. Therefore, we request that HEPRRP shall select Gashora HC to a medicalized HC.</p>	<p>The idea was recorded and will be assessed during the feasibility study collaboration with Rwanda Correctional Services (RCS).</p>
<p>18/07/2025 Kirehe District/ Head Office</p>	<p>Meeting, District staff, DG of District Hospitals, HC Managers, PSF, Representatives of Civil Society, Organizations/Faith-Based Organizations Representatives, Security organs representatives</p>	<p>DG/Kirehe Hospital, animal resource officer and Vice Mayor/Social Affairs suggested that, based on a huge number of people entering the country through Rusumo border and 61 non- gazetted borders, Kirehe district is highly requesting that HEPRRP shall consider at least one health centre to be medicalized and at least one staff van/coaster shall be provided to this hospital and mentioned that to prevent the transfer of diseases from animals to humans, HEPRRP shall help Kirehe District to build a common livestock shed (ibikumba rusange) as well livestock isolation facilities at borders; She said that HEPRRP should find a way of helping and promoting the traditional healers (abavuzi gakondo) in diseases control.</p>	<p>The Environmental and social safeguards project team has recorded the idea and will be assessed in feasibility study and this will depend on budget availability but also the traditional healers shall be considered. The same responses were provided for the issue related to non-gazetted borders as per other bordering districts.</p>

Date/District & venue	Method of consultation and stakeholder	Concerns/recommendations from stakeholders	Responses provided
<p>18/07/2025 Burera District/ Head Office</p>	<p>Meeting with District staff, Director General of District Hospitals, Health Centre Managers, PSF</p>	<p>Vice Mayor in charge of social affairs and Director of health unit appreciated the HEPRRP and asked about the project life time. He requested that apart from Bungwe HC that was selected to be medicalized, Gitare HC from Kagogo Sector also needs to be medicalized. The representative of Butaro Hospital also requested a support to manage the medical waste at Border health care facilities</p>	<p>The project is planned for 5 years and the raised idea have been captured and noted for advocacy to the concerned project management</p>
<p>18/07/2025 Nyagatare District/ Head Office</p>	<p>Meeting with District staff Director General of District Hospitals Health Centre Managers, PSF Representatives Civil Society Organizations, Representatives Security organs</p>	<p>The stakeholders led by the Vice Mayor in charge of social affairs provided the following views: (i) the project implementation shall start as soon as possible to help them to manage the health emergencies used to be a great challenge especially on 3 borders. They also suggested that the project shall provide a medicalized health Centre in Nyagatare district Enough ambulances shall be provided in their district as their HCs are located far from the District Hospitals. In addition to that, they receive patients from bordering countries. And (iii) they suggested that the RBC regularly continue to engage all the stakeholders from Nyagatare District throughout the project.</p>	<p>The Environmental and social safeguards project team noted the idea and agreed to advocate to the concerned project management</p>

Date/District & venue	Method of consultation and stakeholder	Concerns/recommendations from stakeholders	Responses provided
	representatives		

Annex 16: Samples of attendance lists of Stakeholders at local level



Rwanda Health Emergency Preparedness, Response and Resilience Project (RHEPRRP)

Stakeholders engagement and consultation

District and Venue: Ruzizi District / Head office

Date: 16th / 07 / 2025 / 16h00

Attendance list

NO	NAMES	OCCUPATION	INSTITUTION	SEX (F/M)
1.	VURUNZI MAMA	Environment Specialist	RBC	M
2	IREMAHAKUNZE Emmanuel	Head of HC	UKOMBO HC	M
3	MUSABYIMANA Jde Dieu	District Manager	PSF	M
4	Phanuel Sindanyiheba	Mayor	Ruzizi	M
5	Dieudonné MUKASIRAWA	DG	SIBUNWEHA	F
6	SIKURABO Theo Augustin	Advisor to Excom	Kamenbe	M
7	SEKAMANA Jean	NCSA / CAPAD	NCSA	M
8	KURADUSENGE VUKU	Environment Specialist	RUSZI	F
9	BAGIRINKA Coetitia	Disaster mgmt officer	Ruzizi	F
10	NGARAMBE Daniel	Social Safeguards Specialist	RBC	M



Rwanda Health Emergency Preparedness, Response and Resilience Project (RHEPRRP)

Stakeholders engagement and consultation

District and Venue: *BUGESERA District / Head office*

Date: *17/07/2025*

Attendance list

NO	NAMES	OCCUPATION	INSTITUTION	SEX (F/M)
1	<i>KEMURANGWE Ruth</i>	<i>Director of Health</i>	<i>Bugesera</i>	<i>F</i>
2	<i>Dr. Esperance Uwagayite</i>	<i>DM/Nyamata Hsp</i>	<i>Nyamata Hsp</i>	<i>F</i>
3	<i>Patrick Ndirima</i>	<i>A/ADSO (Govt)</i>	<i>District</i>	<i>M</i>
4	<i>BAMURANGWE Apollinaire</i>	<i>Gender officer</i>	<i>Bugesera District</i>	<i>F</i>
5	<i>Dr. MUKUNDA EMILE</i>	<i>Environment & climate change</i>	<i>Bugesera District</i>	<i>M</i>
6	<i>Asimwe JOAN</i>	<i>Chair PSF</i>	<i>PSF</i>	<i>F</i>
7	<i>SP Marguerite NSIRANEZA</i>	<i>DCPO</i>	<i>RNP</i>	<i>F</i>
8	<i>IMANISHIMWE Yvette</i>	<i>Vic Mayor SoA</i>	<i>Bugesera District</i>	<i>F</i>
9	<i>UURUNZIMANA Francois</i>	<i>Environmental Specialist</i>	<i>RBC</i>	<i>M</i>



Rwanda Health Emergency Preparedness, Response and Resilience Project (RHEPRRP)

Stakeholders engagement and consultation

District and Venue: *BUGESERA District/ Head Office*

Date: *17.07.2025*.....

Attendance list

NO	NAMES	OCCUPATION	INSTITUTION	SEX (F/M)
1.	<i>NGAMISURANYE Camille</i>	<i>Disaster Mgt officer</i>	<i>Bugesera District</i>	<i>M</i>
2.	<i>GASANA Callixte</i>	<i>ECD AFP</i>	<i>Bugesera District</i>	<i>M</i>
3.	<i>MUKEMANA Stanislas</i>	<i>DCM officer</i>	<i>Bugesera</i>	<i>M</i>
4.	<i>Bogoyaza Theodor</i>	<i>Hp & Dp officer</i>	<i>Bugesera</i>	<i>M</i>
5.	<i>SIBOMWA Seth</i>	<i>District Veterinary officer</i>	<i>Bugesera</i>	<i>M</i>
6.	<i>TWAGIRIMANA Jean Claude</i>	<i>PRMO</i>	<i>Bugesera</i>	<i>M</i>
7.	<i>NGARAMBE Daniel</i>	<i>Social safeguards specialist</i>	<i>RBC</i>	<i>M</i>



Rwanda Health Emergency Preparedness, Response and Resilience Project (RHEPRP)

Stakeholders engagement and consultation

District and Venue: NYAGATARE DISTRICT H.Q.

Date: 18th July, 2025

Attendance list

NO	NAMES	OCCUPATION	INSTITUTION	SEX (F/M)
1	HAGUMIMANA Stephonise	DARO	Nyagatare District	M
2	UWIMANA Claude	DDMO	Nyagatare	M
3	IS NAYAMPURUKWE Teddy	DR	Nyagatare H	M
4	ABABAHIMANA Ernest	IBSR F.P	Gatumba H	M
5	MURENYI Samuel	CEO	Nyagatare	M
6	KARASIRA Tubence	Association Coordinator	Nyagatare	M
7	Nyuguzi Liliane	P.S.F.	Nyagatare	F
8	MURETHA Rindwa Murezi	RIC	District	M
9	Willy UWIZEYE	Social Safeguards Specialist	RBC	M
10	MUREKATEYE Juliet	VMSA	Nyagatare	F



Rwanda Health Emergency Preparedness, Response and Resilience Project (RHEPRP)

Stakeholders engagement and consultation

District and Venue: NYAGATARE DISTRICT H.Q.

Date: 18th July, 2025

Attendance list

NO	NAMES	OCCUPATION	INSTITUTION	SEX (F/M)
01	NDASIZIYE Innocent	Advisor to the Mayor	Nyagatare District	M
02	KATYEMANA Albert	HP as PO	Nyagatare District	Ge
03	CIP Alice UWIBARISE	ASPO	POP	F

Annex 17: Participants from Public Institutions engaged and consulted at central level

Date of consultation	Institution	Full Names	Position
21/07/2025	REMA	Mr. Jean Luc RUKWAYA	Biodiversity Sector Specialist
21/07/2025	RSB	Mrs. MUKABAYIZERE Denyse Joy	Standards Training Specialist
21/07/2025	GMO	Mrs. MWISENEZA Julienne	Gender Specialist
21/07/2025	RDB	Mr. KARARA Jean de Dieu	EIA Expert
21/07/2025	University of Rwanda-UR	Mrs. Alphonsine UWASE UMUTONI	Academician/ College of Medicine and Health Sciences

Annex 18: Photos taken during stakeholders' Engagement and consultation meetings

Intentionally removed

Annex 19: Members of the team that developed the ESMF

No	Team Members	Position	Institution
1	Willy UWIZEYE	Social Safeguard Specialist	RBC
2	Aimable NIZEYIMANA	Environmental Safeguard Specialist	NCDA
3	Theoneste MUNYENGABE	Social Safeguard Specialist	NCDA
4	Jacqueline MUSONI	ESIA Expert	RDB
5	DUSABEYEZU Aloys	Environmental Safeguard Specialist	RBC
6	UWISUNZIMANA Francois	Environmental Safeguard Specialist	RBC
7	Daniel NGARAMBE	Social Safeguard Specialist	RBC
8	Deborah NIBAGWIRE	Air Quality Specialist	REMA
9	John MUGABO	Waste management Sector Specialist	REMA
10	Etienne NTIKUBITUBUGINGO	Consultant, ESF	WB