REPUBLIC OF SIERRA LEONE

AFRICAN DEVELOPMENT BANK GROUP

MINISTRY OF AGRICULTURE AND FORESTRY IN SIERRA LEONE WEST AFRICA

Environmental and Social Management Framework (ESMF)

Prepared for the
RICE AGRO INDUSTRIAL CLUSTER (RAIC) PROJECT
IN
SIERRA LEONE

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ENVIRONMENTAL CONSULTING SERVICES
SIERRA LEONE

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Abbreviations and Acronyms

ABC	**Agri-business Centre**
ADB	**Africa Development Bank**
BDS	**Business Development Service**
CESMP	**Contractor's Environmental and Social Management Plan**
DAO	**District Agricultural Officer**
DCU	**District Coordinating Unit**
ESHIA	**Environmental, Social and Health Impact Assessments**
EMP	**Environmental Management Plan**
EHS	**Environmental Health and Safety**
BDS	**Business Development Service**
CESMP	**Contractor's Environmental and Social Management Plan**
DAO	**District Agricultural Officer**
DCU	**District Coordinating Unit**
ESHIA	**Environmental, Social and Health Impact Assessments**
EMP	**Environmental Management Plan**
EHS	**Environmental Health and Safety**
EHSP	**Environmental Health & Safety Plans**
ESIA	**Environmental Social Impact Assessment**
ESSO	**Environmental and Social Safeguards Officer**
EPA-SL	**Environmental Protection Agency – Sierra Leone**
ESMF	**Environmental and Social Management Framework**
ESMP	**Environmental and Social Management Plan**
ESSF	**EPA-SL Environmental and Social Screening Form**
EVD	**Ebola Virus Disease**
ECS	**Environmental Consulting Services**
FAO	**Food and Agriculture Organization**
EHSP	**Environmental Health & Safety Plans**
ESIA	**Environmental Social Impact Assessment**
FBOs	**Farmer based organizations**
GDP	**Gross Domestic Product**
GHG	**Green House Gas**
GOSL	**Government of Sierra Leone**
GRM	**Grievance Redress Mechanism**
IDA	**International Development Association**
IFC	**International Finance Corporation**
LG	**Local Government**
FBOs	**Farmer based organizations**
GDP	**Gross Domestic Product**
MAF	**Ministry of Agriculture and Forestry**
MDAs	**Ministries, Departments and Agencies**
M&E	**Monitoring and Evaluation**
MTI	**Ministry of Trade and Industry**
MoF	**Ministry of Finance**
NEP	**National Environmental Policy**
NGO	**Non-Governmental Organization**
NRM	**Natural Resource Management**
MAF	**Ministry of Agriculture and Forestry**

MDAs	**Ministries, Departments and Agencies**
PAP	**Project Affected People**
PCU	**Project Coordination Unit**
PMT	**Project Management Team**
RPF	**Resettlement Policy Framework**
RAP	**Resettlement Action Plan**
SMEDA	**Small and Medium Enterprises Development Authority**
SLSB	**Sierra Leone Standards Bureau**
SMEs	**Small and Medium Scale Enterprises**
VOCs	**Volatile Organic Compounds**
WBG	**World Bank Group**
SLADF	**Sierra Leone Agribusiness Development Fund**
SLARI	**Sierra Leone Agricultural Research Institute**
SLECAD	**Sierra Leone Chamber for Agribusiness Development**
SLIEPA	**Sierra Leone Investment and Export Promotion Agency**
SMEDA	**Small and Medium Enterprises Development Agency**
SMEs	**Small and Medium Scale Enterprises**

Executive Summary

Agriculture including forestry and fisheries is the backbone of the economy and the main source of livelihoods in Sierra Leone. It employs about 70% - 75% of the active labour force and contributed close to 50% of the country's economic GDP in 2017. The agriculture sector is heavily dominated by the production of staple crops, mainly rice, maize and cassava, accounting for over three-quarters of the sector's output. The country is endowed with sufficient land and water resources favorable to agriculture but despite this potential, both production and productivity are low as a result of the reliance on rain-fed subsistence farming practices.

The Government of Sierra Leone has secured funding from the African Development Bank to finance the Rice Agro Industrial Cluster (RAIC) Project. The overall strategic objective is to promote food security in Sierra Leone through development of rice value chains to improve livelihoods. The specific objective is to transform the potentials of two contiguous stretches of agricultural land (totaling about 200,000 hectares) in Torma Bum and Gbondapie in the Bonthe and Pujehun Districts of Sierra Leone into breadbasket.

RIAC Environmental and Social Management Framework Approach

In seeking to implement the RIAC, Project intends to comply with all relevant national and international environmental requirements in order to meet legal obligations and to ensure sustainable project planning and implementation. The obligations include the following:

- **Compliance with EIA requirements to meet Sierra Leone Environmental Protection Agency Act and the Environmental Assessment Regulations**
- **Conduct of ESMF to meet AfDB Environmental Assessment Guidelines and relevant Bank Safeguard policies and procedures**

Purpose of the ESMF

The primary purpose of this Consultancy service is to prepare an Environmental and Social Management Framework (ESMF) to be used for the implementation of the Project. The ESMF is a Documents with the necessary policies, principles, institutional settings or arrangements and procedures that the project proponents will follow in each subproject in addressing environmental and social issues of this RIAC project. The Environmental and Social Management Frameworks (ESMF) is used in the case of operations with multiple subprojects whose detailed engineering design, precise location and the entire gamut of environmental and social safeguard issues involved are not fully known. It spells out corporate environmental and social safeguard policy frameworks, institutional arrangements and capacity available to identify and mitigate potential environmental and social safeguards issues and impacts of each subproject.

Project Development Objective

The overall strategic objective is to achieve rice self-sufficiency in Sierra Leone through the development of the rice value chain to improve livelihoods. The specific objective is to transform the potentials of two contiguous stretches of agricultural land (totalling about 92,300 hectares) in Torma Bum and Gbondapie in the Bonthe and Pujehun Districts of Sierra Leone respectively.

The proposed Rice Agro Industrial Cluster Project (RAIC) will consist of four components as follows:
Component 1: Enhancement of Agricultural Production Systems;
Component 2: Green Industrial Cluster Development;
Component 3: Capacity Building and Institutional Strengthening;
Component 4: Project Management

Legislative, Policy and Institutional Framework

This ESMF has been created through a combination of continuous partnership gatherings and meetings and comprehensive audits of the Evaluation Archive (Cushion), Extend Report Targets and pertinent Sierra Leonean enactment, arrangements and rules and the Africa Development Bank guidelines on Environmental and Social Safeguard Policies (Environmental Assessment).

Africa Development Bank Environmental and Social Framework

The ADB ESF seeks to support borrowers develop and implement environmentally and socially sustainable projects as well as build capacity in the assessment and management of environmental and social impacts and risks associated with the implementation and operation of projects. The ESF contains environmental and social standards that borrowers must apply to all projects in order for the projects to be sustainable, non-discriminatory, transparent, participatory, environmentally and socially accountable as well as conform to good international practices. The ten (10) Environmental and Social Standards are:

i. **Environmental and Social Assessment (OS1)**
ii. **Involuntary Resettlement: Land Acquisition, Population Displacement and Compensation (OS2).**
iii. **Biodiversity and Ecosystem Services (OS3)**
iv. **Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials (OS4):**
V **Labor Conditions, Health and Safety (OS5):**

The Rice Agro-Industrial Cluster (RIAC) Through the Development of Rice Value Chain to Improve Livelihoods.

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chains to improve livelihoods. The specific objective is to transform the potentials of two contiguous stretches of agricultural land (totaling about 200,000 hectares) in Torma Bum and Gbondapie in the Bonthe and Pujehun Districts of Sierra Leone into breadbasket

Positive Environmental and Socio-Economic Impacts

The Rice Agro Industrial Cluster (RAIC) Project is developed to improve farm productivity and farm production. Subsequently, the project will improve household incomes, stabilize and improve sustainable rural livelihoods, enhance food and nutritional security and contribute to poverty reduction through increased marketing of agricultural produce and minimize post-harvest losses in the targeted rice value chains clusters in Sierra Leone. The outputs of this project will translate into multiple positive economic and social outcomes whose indicators include:

- **improved environmental management through good agricultural production practices;**
- **reduced pollution through integrated pest management systems;**
- **increased agricultural productivity and production;**
- **increased value of agricultural produce values through agro-processing;**
- **increased marketing opportunities;**
- **minimized post-harvest losses of agricultural produce and subsequent increased food and nutritional security;**
- **improved trade in high quality agricultural produce both locally and internationally with neighboring countries particularly Liberia and Guinea**
- **improved household and community incomes hence improved living standards, food security and improved nutrition through diversified food supplies;**
- **improved transportation infrastructure and marketing as well as storage facilities for the agricultural produce;**
- **increased employment opportunities both directly and indirectly by people employed during the development works as well as those who will be employed in agro-processing, marketing, sale of farm inputs, etc.;**
- **improved agricultural production skills through training and extension services;**
- **enhanced environmental management skills through capacity building of staff involved in the project; and,**
- **improved food storage and processing infrastructure.**

Potential Negative Environmental and Social Impacts

The RIAC rice production schemes (youth and women) will partly be implemented through irrigation. This will include the use of boreholes to irrigate the farms, construction of new dams where necessary, rehabilitation of existing dams, and by impounding rice perimeters. During construction, equipment such as a heavy mobile plant (e.g., graders, bulldozers, excavators) will be used where green fields will be converted into rice growing perimeters.

The identified negative impacts anticipated include:

- **vegetation, habitat and biodiversity destruction and loss during the development and construction of markets, agro-processing infrastructure, storage facilities and transportation infrastructure;**
- **the used of agro-chemical**
- **generation of solid wastes as a result of excavations during construction works;**
- **compaction of soils and destabilization of the geological balance during infrastructure development;**
- **solid waste and wastewater generation due to increased populations in construction sites and market places;**
- **dust, air quality and noise pollution during construction works arising out of construction works and transportation of both construction materials and wastes;**
- **threats of occupational health and safety, especially during construction works;**
- **soils, rivers and wetlands pollution from increased use of agro-production chemicals due to increased agricultural production activities;**

threats of transmissions of HIV/AIDs and other communicable diseases due to increased social interactions and congregations. The table below summarizes the potential negative impacts of the RIAC project

Environmental and Social Baseline

Base on the IBAT formula, studies was carried out by ADB team at Tormabum and Gbondapi wetlands and fresh water areas. Base on the downstream results, 21 species were found to be threaten base on the IUCN red list category. Off the 21 threaten species, 8 species were found within the sub-site basin whiles the remaining 13 species were found downstream within the (-100km) areas.

The results of the up-stream species that are threatened is 8, and all of them are found within the Sub-basin.

There were also 77 species of migratory species that were found within the two project sites. and they were found up stream within the sub-basin (37 species) 40 species were found downstream (-100km).

As for the species richness information with regards to the number of fresh water species that were found within the basin, a total of 328 species were recorded of which 2 were listed as critically endangered, 2 as endangered and 4 as Vulnerable.

Project Screening

All sub projects under Sub-Components 1.1, 1.2 ,1.3, 2.1, 2.2, 2.3, 3.1 and 3.2 with environmental and social risks in the under listed categories will undergo screening:

i. **Physical/civil works;**
ii. **those that have the potential to expose workers and community members,**
iii. **those that have elements of procurement, transportation, storage, handling, use**

and disposal of chemical/agro-chemicals;

iv. **recruitment of employees**

v. **those that will involve land acquisition or any form of displacement including physicalor economic;**

vi. **those that have the potential to expose health workers and/or the general and other health risks.**

Stakeholder Consultations

With the outbreak and spread of COVID-19, people have been advised, or may be mandated by national law, to exercise social distancing and specifically to avoid public gatherings to prevent and reduce the risk of the virus transmission. Sierra Leone has taken various restrictive measures including imposing strict restrictions on public gatherings, meetings and people's movement. Consultations were held from the 2nd to 10th of July with the Ministry of Agriculture and other line Ministries and agencies such as (EPA-SL, SLARI, SLESCA, NAFRA, SLeSCA, SLeCAD, NaFFSL, Njala University etc. At local level, a wide range of consultations were held with local communities and beneficiaries, CBOs, NGOs, private actors and religious chiefs.

Potential Environment and Social Management Plan

The proposed interventions under Sub-Component 1.1, 1.2 1.3, 2.2, and 2.2, will involve the rehabilitation/extension of irrigation schemes, watershed conservation/management, construction of rain harvesting and soil conservation infrastructure such as, seed production and distribution as well as the establishment of new processing and storage centers. In addition, the project will support agro-processors (Milling facility) with infrastructure and equipment to increase production and distribution of rice. These project interventions are expected to generate the under listed beneficial environmental and social impacts:

i. **The project will minimize the adverse effects of COVID 19 on food production and supply systems and enhance food security amidst the COVID 19 pandemic;**

ii. **During the construction phase, employment opportunities will be directly available for unskilled, semi-skilled and skilled workers such as drivers, laborers and technicians as well as engineers to be engaged by the PIU of the Ministry of Agriculture and Forestry, Contractors and Sub- contractors on sub projects such as the construction of water conservation structures like, processing and storage centers and rehabilitation/extension of irrigation schemes;**

iii. **Employment and income earning opportunities will also be opened up for Seed Producing Entities and rice Mill owners and operators and ancillary services that support these entities such as those into haulage during the operational phase. It is also expected that the newly constructed processing and storage centers will also attract workers such as loading crew, security men and supervisors;**

iv. **Training programs for farmers, Irrigation Associations members, millers and other stakeholders on issues such as water conservation, that will be delivered under the project will also improve capacity of persons in these categories to better deliver their services and become more productive.**

Procedures to Address Environment and Social Issues

A number of activities will be undertaken to ensure that the environmental and social impacts/risks of sub projects under Sub-Component 1.1, 1.2 ,1.3, 2.1, 2.2, 2.3, 3.1 and 3.2, are duly identified, assessed and managed; and reporting requirements of ADB with national laws are complied with. These are discussed in the following sub sections. It must be noted that an Environmental and Social Commitment Plan (ESCP) containing high level commitment from the Government of Sierra Leone to mitigate environmental and social impacts/risks associated with this RIAC project will be prepared and disclosed

Project Implementation Arrangements, Responsibilities and Capacity Building

The Project Management Unit will have overall responsibility to implement the RIAC Project. The Agriculture Ministry will establish a PMU within the Ministry. The Project Director of the Project at PMU will have overall responsibility for ensuring compliance with ES requirements as set out in this ESMF. The RIAC regional office will have dedicated E&S units to support the Project Director. The Project Regional Office will have one Gender Officer and Two (2) ESS Officers (One social and (1) ESS**). The PMU will also have one environmental specialist, One Social safeguards Specialist and a gender expert.**

The environmental specialist and social safeguard specialist of the Management Unit of the PMU will be responsible for reviewing project related Environment and Social safety instruments such as screening reports, ESIAs and ESMPs, ensuring that sub project ESMPs and E&S clauses are inserted into Contractors bidding documents as well as monitoring environmental and OHS aspects of the project during implementation. He/ She will be responsible for preparing quarterly reports, which will indicate compliance with OHS and environmental mitigation measures proposed in the Sub Project ESMPs etc. for the Bank's review. The Environmental Officer will ensure that the project complies with OS1, OS2, OS3, OS4 and OS5 requirements.

The Environmental Officer will be expected to liaise closely with other relevant government agencies and stakeholders at national and regional levels for to ensure that the implementation of the sub projects conform to national environmental policies.

The Social Officer will be responsible for reviewing project related social ES instruments such as screening reports, LMPs, and ESMPs. The Social Safeguard Specialist will be handling the Grievance mechanism process implementation. He/ She will ensure that the sub projects are designed and implemented in accordance with OS1, OS2, OS3, OS4 and OS5 requirements together with Sierra Leone Labor laws.

The Social Officer will also be responsible for disclosing approved social ES instruments such as Sub Project in the event land acquisition for this RIAC project and sub projects that may leads to involuntary resettlement. He/ She will disclose hotlines for purpose of receiving grievances during the implementation of the project.

Gender Officer at the RIAC/PMU will also be responsible for monitoring the implementation of Labor and GVB/SEA mitigation measures in the ESMF, Sub Project ESMPs and other ES instruments during the preparation and implementation of all project components. The Social Officer will also coordinate training and sensitization

program on social management, OHS and related issues including inclusion of Sexual harassment, sexual exploitation and Gender base violence.

Regional Environmental, Social and Gender Officers will be appointed to support the appointed officers at the PMU (national level). Specifically, they will be responsible for monthly environmental and social monitoring and reporting on sub projects within their jurisdiction. They also under environmental and social due diligence of Companies to ensure they compile with the requirements of OS1, OS2, OS3, OS4 and OS5. They will also be part of the grievance redress mechanisms at the sub project level. Regional level environmental, social and gender officers will be responsible for screening of sub projects within their jurisdictions, preparing and submitting screening reports to the PIU for review.

The budget for the implementation of the Impactable Components and Associated Impact Indicators is One Hundred and Twenty-Five Thousand dollars (125,000 USD), the cost for the implementation of the Environmental and Social Training Plan is Three Hundred and Ninety-One thousand dollars (391,000 USD) whiles the budget for the implementation of the Environmental and Social Mitigation Cost of the ESMF is three hundred and twenty thousand dollars (320,000 USD). The grand total is of the overall budget for the ESMF is Eight Hundred and Thirty-Six Thousand dollars (836,000 USD).

1.0 Background

Agriculture including forestry and fisheries is the backbone of the economy and the main source of livelihoods in Sierra Leone. It employs about 70% - 75% of the active labour force and contributed close to 50% of the country's economic GDP in 2017. The agriculture sector is heavily dominated by the production of staple crops, mainly rice, maize and cassava, accounting for over three-quarters of the sector's output. The country is endowed with sufficient land and water resources favorable to agriculture but despite this potential, both production and productivity are low as a result of the reliance on rain-fed subsistence farming practices.

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1.1 RIAC Environmental and Social Management Frame Work Approach

In seeking to implement the RIAC, Project intends to comply with all relevant national and international environmental requirements in order to meet legal obligations and to ensure sustainable project planning and implementation. The obligations include the following:

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1.2. Purpose of the ESMF

The primary purpose of this Consultancy service is to prepare an Environmental and Social Management Framework (ESMF) to be used for the implementation of the Project. The ESMF is a Documents with the necessary policies, principles, institutional settings or arrangements and procedures that the project proponents will follow in each subproject in addressing environmental and social issues of this RIAC project. The Environmental and Social Management Frameworks (ESMF) is used in the case of operations with multiple subprojects whose detailed engineering design, precise location and the entire gamut of environmental and social safeguard issues involved are not fully known. It spells out corporate environmental and social safeguard policy frameworks, institutional arrangements and capacity available to identify and mitigate potential environmental and social safeguards issues and impacts of each subproject.

The location and details (scope) of the planned physical works and other interventions are not known at this stage. Therefore, a framework approach has been adopted to address potential social and environmental issues and ensure consistent treatment of social and environmental concerns during project planning/designing, implementation, operation and decommissioning. The Environmental and Social Management Framework (ESMF) has been developed specifically to avoid, reduce or mitigate
adverse social or environmental impact/risks, consistent with existing national legislations and the Environmental and Social Standards in the Africa Development Bank Environmental and Social Framework. The ESMF has also been guided by the WBG EHS Guidelines, with mitigation measures and good practices and can be used by the project to develop the ESMP. Proper stakeholder engagement and consultation should be conducted in selected sites with relevant communities to determine the community-based mitigation measures, and adhere to technical guidance for site specific environmental and social screening, preparation ES instruments for interventions that have environmental and social risks and impacts.

1.3 General Baseline Information

The reestablishment of democracy in Sierra Leone over five election cycles since 1996 and the smooth transition of power across political parties are important hallmarks of peace, stability, and a growing democracy in the country. However, some signs of fragility remain. With a Human Development Index (HDI) of 0.438 and ranked 181 out of 189 countries, Sierra Leone is one of the poorest countries in the world (UNDP, 2019). Since the end of the civil war in 2003, there has been some progress made by the Government of Sierra Leone (GoSL) and development partners in the efforts towards alleviating poverty in the country. At the household level, poverty levels decreased from 66.4 percent in 2003 to 52.3 percent before the Ebola epidemic in 2013 (i.e., the peak of the iron ore boom) and currently stands at 56.8% pre-COVID 19 (World Bank, 2019), (STAT-SL, 2019). The ample availability of fertile land and a climate suitable for agriculture continue to facilitate growth in the agricultural sector, which contributes the largest share to the country's GDP annually - 57.4 percent in 2019 (World Bank, 2019). There has also been an increase in foreign direct investment (FDI) in the mining and agricultural sectors, although the contributions of the mining sector to job creation and fiscal revenue have been marginal. In recent years, the GoSL has been striving to improve the business environment to attract private sector investments into key growth sectors to foster economic growth and development of the country. However, some key challenges continue to impede private sector participation in the economy. Some of these include: 1) a costly energy mix; 2) transport-related barriers to markets; 3) low connectivity and technology adoption; and 4) vulnerability of the country's infrastructure to climate change.

The COVID-19 pandemic has caused significant disruption in supply chains and productive activities in the country. As a result of these shocks, the economy is forecasted

to contract by 2.3 percent in 2020, signifying that growth could be lower than the original projections by 0.3-1.8 percent over the medium-term. The country's strategic approach to addressing the COVID-19 impacts is to maintain a balance between short-term and long-term needs as well as
flexibility. Some of the short-term needs include the identification of isolation centers, expanding surveillance, case management, cash transfers to the poor etc. The medium-term responses include support to agriculture, grant mechanisms for businesses etc. The long-term responses include building human capital, strong macro-fiscal management etc. These short-term measures have been instrumental in minimizing the anticipated shocks of the pandemic at the household level.

The country's urban centers are prone to natural disasters, mainly in the form of recurrent floods and landslides, which are likely to be exacerbated by poor urban planning and settlement regulations and climate change. An increasing urban population due to rural-urban migration also poses social and environmental pressures on infrastructure and resources in urban centers. For example, in the last 15 years, the country has experienced four major floods that affected over 220,000 people (World Bank, 2017). The GoSL recognizes the importance of gender inclusiveness in economic growth and has put strategies and policies in place to address it. More importantly is the empowerment of women, youth, and the vulnerable groups in its development agenda for poverty reduction and job creation. The National Gender Strategic Plan 2019–2023 currently under finalization will serve as a blueprint for the implementation of all policies that are related to gender and the empowerment of women in Sierra Leone

2.0 Project Description

2.1 Project Location Area

The potential Project location area is likely to be within the two contiguous stretches of agricultural land within the Bonthe and Pujehun Districts of Sierra Leone. Figure 1 shows the two contiguous stretches of agricultural land (totaling about 200,000 hectares) within the Bonthe and Pujehun District

Figure 1 Showing the project Location

2.1.1 Project Development Objective

The overall strategic objective is to achieve rice self-sufficiency in Sierra Leone through the development of the rice value chain to improve livelihoods. The specific objective is to transform the potentials of two contiguous stretches of agricultural land (totalling about 92,300 hectares) in Torma Bum and Gbondapie in the Bonthe and Pujehun Districts of Sierra Leone respectively.

The proposed Rice Agro Industrial Cluster Project (RAIC) will consist of four components as follows:

Component 1: Enhancement of Agricultural Production Systems;
Component 2: Green Industrial Cluster Development;
Component 3: Capacity Building and Institutional Strengthening;
Component 4: Project Management

2.2 Project Component Description

Component 1: Enhancement of Agricultural Production Systems

Subcomponent 1.1: Improved input supply

The RAIC project will contribute its support for enhanced productivity by implementing activities that will sustainably promote agriculture yields and profitability. A sustainable means of supplying improved seeds of high yielding varieties is imperative for success. Therefore, Certified Seeds will be sourced from competent private sector seed company(ies). The firm(s) will obtain the Breeder and/or Foundation seed of the improved varieties from competent research organizations such as Africa Rice and SLARI. The private sector seed production companies will be provided with space at the project area to for seed multiplication. This will ensure a seamless linkage with the commercial farmers and smallholder out growers. It will also ensure that quality of seed supplied is easily monitored by stakeholders. About 250 – 500 MT of certified seeds will be required by the farmers within 2 – 3 years of the project.

Subcomponent 1.2. Land and water management

The project will support the development of key climate smart agricultural infrastructures that will strengthen the climate resilience of rice through improved management of agricultural water and lands. The major support will be in the provision of technically feasible water management and flood control measures that will facilitate the increased production of rice paddy (and some vegetables) throughout the year in the selected location(s). The infrastructure development will be aligned with the crop varietal selections and flooding seasonal cycle to optimize the utilization of the land. Also, key access roads will be rehabilitated to ensure ease of movement of goods, machinery and persons to and from the selected locations, and therefore reduce post-harvest loses caused by climate damages on rural transportation infrastructures.

The RAIC project will boost rice production and value addition in Sierra Leone by the development of irrigated rice farming in the Torma Bum and Gbondapi axis with a

contiguous stretch of about 200,000ha flood plains out of which about 100,000Ha can be used for rice production. The Project plans to develop irrigated dry season farming using pipeline irrigation in about 5,000ha out of the 50,000ha project site. Existing farmers in this location cultivate floating rice under rainfed / flood conditions in limited parts of the area. They currently face the severe challenges of seasonal flooding, low yields among others. The rivers adjoining the area usually overflow in the rainy season and cover the vast areas. Therefore, the project aims to establish water management structures for irrigated cropping of early maturing and high yielding varieties. This strategy will enable the all-season cultivation of rice with the harvests from the rainy season complimenting the expected higher volumes produced under irrigated conditions in the dry season.

Component 2: Green Industrial Cluster Development

The RAIC project will establish a milling cluster that will upgrade the milling technology of operators. The project intends to establish a cluster that will house 15 milling units of 1.5T/h milling capacity that are capable of producing high quality milled rice at the defunct Sierra Leone Rice Cooperation (SLRC) site at Torma Bum. This location is already having some semblance of an industrial hub with big players like ABHAJAR Rice Company (operates a 2-unit rubber roll mill without destoning capability) and WARC (operates a mechanized 5 Tonne/batch mechanized dryer) running some processing activities there. The housing of the old and dilapidated SLRC mill with its vast drying floor is also situated in this location. The major businesses that will be located at the cluster are as follows:

The RAIC project will require space to establish the industrial cluster in which the milling stations that will be operated by private sector owners will be housed. The mills will be off-takers for the paddy produced from the fields. The producers will be guided to produce the varieties suitable for the production of high-quality products. The processing of rice paddy will be promoted by introduction of improved rice processing technologies such as, false bottom (steam) parboilers, rubber roll rice milling technology and destoners. The project will also support the recycling and use of rice by-product for livestock feed and for producing renewable energy. The yield and quality of paddy will increase to make the products more competitive in volume and pricing. The farming and processing will be aligned to achieve uniformity in finished products that can compare with imported products.

The parboiling process will be developed as a woman dominated business. The women will be trained and equipped for steam parboiling and drying operations. Another line of business will be developed for destoning of milled rice products. There will be mandatory destoning of all rice products leaving the cluster. The packaging will proudly have a label claim that declares the stone-free status. Colour sorting service will be used to give the products the finishing that will make it comparable to the imported rice products. The products will be packaged in attractively designed bags. Another business will be established for the production of husk briquettes to be used as renewable energy and for

saving the use of firewood. This same business can also package bran for sale or use bran to formulate a livestock feed premix by incorporating broken grains and/or rice dust. Some youths will be trained and equipped with thresher-cleaners to offer threshing services. This will be especially important when manual harvesting is inevitable such as when the field is not conducive for the combined harvester equipment. Paddy Aggregation business may be owned by the association (s) operating at the cluster. They will be responsible for negotiating with the farmers and receive the cleaned grains. They will bag, standardize and grade the rice paddy before transfer to the millers.

Component 3: Capacity Building and Institutional Strengthening

Identified skills gaps which inhibit productivity will be targeted and closed in such a way that the value chain is made stronger and productivity is improved. Care will be taken to ensure that beneficiaries of previous capacity building and training programmes who are available will be absorbed into the project to avoid duplication. The trainings will be implemented in collaboration with identified local agriculture training institutions to improve their capacities and ensure sustainability of the project outcomes. Where new technologies are being introduced selected trainees for such will have their knowledge base improved to be able to operate or manage the new systems. Training will be provided in such areas like fabrication of simple equipment, operation of new equipment, modern rice production processes, quality management etc. and they must add value to the system with the new skills. Organizational strengthening in areas where the beneficiaries will work in groups will be provided for synergy. The following training engagements will be offered:

3.1 Training of fabricators on production of axial flow thresher-cleaners

Young fabricators will be trained in thresher fabrication and patronized to produce threshers. Youth groups will be given grants to access the threshers and develop thresher service businesses. Also, youths will be given grants to access power tillers and commence mechanization services. This will greatly reduce the drudgery of the farming activities and encourage the youths to engage in farming activities. The workshop of the Njala University will be supported with equipment upgrade and their workshop technologists and / Technologists will be trained on Thresher fabrication to enable by the engineering faculty to become a thresher fabrication training centre.

3.2 Training on current Good Agricultural Practices, current Good Manufacturing Practices, Food Product Safety & Quality Management, Branding/marketing, High Value Rice Products, Environmental Safety Management and Managing Climate Risks.

3.3 Training of youth and women in entrepreneurial skills

Special provisions will be created to empower women and youth in the project to become business and enterprise owners. Areas like the rice parboiling units will be managed by women groups who will be trained specifically on the skills required to use the parboiling

and drying process to achieve high quality products. Youth will be trained as operators of the new equipment for rice milling. They will also be trained for equipment maintenance, product packaging and quality management as well as entrepreneurship skills and business management. Youth entrepreneurs will manage such stand-alone profitable services in the milling operations like drying, threshing, destoning. Those trained in the fabrication of such equipment like threshers, parboilers, and dryers could be assisted to set up their own businesses. Women who are qualified will be granted equal access for mill ownership like their male counterparts. Women will be involved in the trading of the products, advertisement and consumer persuasion activities that will herald and declare the quality of the products.

3.4 The project management and appropriate government agencies will be supported with Technical Assistance in areas they are deficient to ensure the project will achieve in its objective but also grow the overall national capacity. The project will support the development of capacity in some specialty areas: a) Irrigation Engineering (Njala University /MAF); b) Hydrology (FBC & Njala University); c) Food Safety (Njala University); and d) Food Technology (Njala University)

Component 4: Project management

The MAF will play the leading role in the project management and coordination through the National Development Partner Projects Coordination Office (NDPPCO) housed at the Ministry. A project team including a youth entrepreneurship expert and a gender expert will be established under the coordination of the MAF. The technical team will obtain requisite management information for the MAF leadership that is linked to the Bank oversight. Periodic reporting with adequate management information is key to effective management. The day-to-day operations in the industrial cluster and farmers water management areas will be managed by the effective cluster association(s) of operators while the ministry will play the role of the regulator.

2.3 Methodology

The method used in preparing this ESMF comprised literature review and interactive discussions and consultation. Several documents were reviewed. A number of individuals and institutions were consulted, including staff of the Ministry of Agriculture and Food Security (MAFS). Further public consultations and stakeholder engagement and personal contributions, including project beneficiaries will be carried out after the specific counties of the project have been identified. The preparation process included:

(i) Collation of baseline data on the environmental conditions of the country in general;

(ii) Identification of positive and negative environmental and social impacts of the proposed projects at potential sector level; and,

3.0 Legislative, Policy and Institutional Framework

This ESMF has been created through a combination of continuous partnership gatherings and meetings and comprehensive audits of the Evaluation Archive (Cushion), Extend Report Targets and pertinent Sierra Leonean enactment, arrangements and rules and the Africa Development Bank guidelines on Environmental and Social Safeguard Policies (Environmental Assessment).

Table 2: Summary of the Institutional and Policy frame work

Legislation/Policy	Summary	Relevance	Comments
National Constitution of Sierra Leone 1991	The Constitution of Sierra Leone is the overarching legal instrument that provides for the protection of the rights of individuals, private property, and sets principles under which citizens may be deprived of their property in the public interest as described in Section 21 of the Sierra Leone Constitution.	The proposed Project should observe the constitution in as far as environmental protection is concerned. the project should be consistent with the sustainable development provisions enshrined in the Constitution	There are several provisions in the constitution, which have direct policy, legal and institutional implications towards the Appropriate implementation of Environmental protection and rehabilitation action plans to avoid, mitigate or compensate the adverse effects of development actions on the existing environment and social dynamics.
Environment Protection Agency Act, 2008/2010			
The Draft Forestry and Wildlife Sector Policy for Sierra Leone, 2003	This draft policy document is still under review and awaiting parliamentary approval. The goal of the document is to support the development and exploitation of forests and wildlife of Sierra Leone in a sustainable manner for the	The proposed project and the environmental specialist should make sure that, no species or IUCN red list species should not be destroying or exploited or kill if found within the proposed project areas.	The ESMP construction document will address all the mitigation measures for this RIAC Project.

	material, cultural and aesthetic benefit of the people of Sierra Leone. The main objectives of the forestry policy are to: **1) Promote best practices in forest management so as to develop an environmentally friendly, self-sustaining forestry sector that is sensitive and responsive to the economic, social and cultural needs of those who live adjacent to or are dependent on the forest;** **2) Foster enabling environments for supervised production of sustainable volumes and quality of forest products that will create national wealth and contribute to food security; and** **3) Encourage the private sector to create employment opportunities for local populations thereby reducing rural poverty**		
Conservation and Wildlife Policy, 2010	**The policy aim is to achieve an "integrated wildlife sector that achieves sustainable, rights-based management of wildlife resources for biodiversity conservation inside and outside wildlife conservation areas which benefits present and future**	**This policy is aligning with the implementation of this project by the involvement of the local people (youth, women, men etc). The capacity development and management component will address the issues in this policy in terms of training in wildlife and**	**The capacity of all the project communities will be develop and they will be able to adapt to or continue with this project after the life span of the RIAC project.**

	generations of Sierra Leone and humankind in general	**conservation for future generations.**	
Forestry Policy, 2010	**The Forestry Policy support relevant provisions of the Constitution which permits restrictions on activities within forests which is reasonably required in the interests of conservation of the natural resources, the respect for international law and treaty, obligations, as well as the seeking of settlement of international disputes by negotiation, conciliation, arbitration or adjudication. This Forestry Policy also supports strategies outlined in the Framework for Effective Management of Natural Resources.**	**The proposed project and the environmental specialist should make sure that, no species or IUCN red list species should not be destroying or exploited or kill if found within the proposed project areas.**	**The ESMP construction document will address all the mitigation measures for this RIAC Project.**
Biodiversity Strategic Action Plan, 2003	**The Sierra Leone Biodiversity Strategic Action Plan comprises a series of measures and mechanisms intended to conserve and promote the sustainable use of the different components of the Country's Biodiversity. The actions proposed covers several thematic areas under: terrestrial biodiversity, inland water ecosystems, forest biodiversity,**	**The relevance of this biodiversity strategic action plan 2003 can be seen in all the sub-project components especially, sub-project component 1,2 and 3. As the project will be implemented within inland water ecosystem areas.**	**The Environmental specialist will make sure that all project staffs and contractors adhere to the protection of the biodiversity within and around the project communities.**

	marine and coastal biodiversity and agricultural biodiversity. In addition, actions are also proposed for key cross-cutting issues affecting the sustainable utilization of biodiversity, including: policy, legislation and institutional review, capacity building, identification and monitoring, sustainable use, incentive measures, research and training, public education and awareness, regulation of access to genetic resources, protection of indigenous knowledge and intellectual property rights of local communities, technology transfer and handling of biotechnology and exchange of information and technical co-operation. This Action Plan is intended to: Provide a framework for setting priority policies and actions for the conservation and sustainable use of biological diversity in Sierra Leone; Catalyze and provide guidance for legal policy and institutional reforms necessary to achieve effective conservation and sustainable use of biological diversity; Enhance the planning and co-ordination of national efforts aimed at the		

	conservation and sustainable use of biological diversity; Guide the investment and capacity building programmer for the conservation and sustainable use of bio-diversity; Facilitate information sharing and coordinated action among the various stakeholders at the national level and foster scientific and technical cooperation with other countries and international organization.		
Disaster Management Preparedness Plan, 2006.	**As part of its post-war recovery effort, the Government of Sierra Leone reviewed its National Security Structure to meet the demands of the 21st century. This led the Government to enact the National Security and Central Intelligence Act in 2002 thereby mandating The Office of National Security to be the Government of Sierra Leones primary coordinator for the management of national emergencies such as disasters both natural and man-made The disaster management Plan, 2006 is a comprehensive approach that enhances increased political commitment to disaster risk management, thereby encouraging government agencies to take the lead**	**This policy is relevant during the construction phase and planting phase of this project as there will be vehicles that will be plying the route and with proper signage and safety precaution training and sensitization for all the project staffs, driver and the community people. And this project is going to address the disaster management under the third sub-component which is capacity building**	**Disaster management and safety precaution measures and mitigation measures will be address in the ESMP construction documents of all contractors.**

	and supported by non-governmental organizations. It also promotes public awareness and the incorporation of disaster risk management into development planning. The policy highlights the sources of funding and the reduction of bureaucracies in accessing such funds for effective disaster co-ordination. The Policy document emphasizes the following: Ensure the integration of disaster risk management into sustainable development programmes and policies to ensure a holistic approach to disaster management; Ensure priority and requisite institutional capacities for disaster risk reduction at all levels; Enhance the use of knowledge, education, training, innovation and information sharing to build safe and resilient societies; Improve the identification, assessment, monitoring and early warning of risks; Improve effectiveness of response through stronger disaster preparedness.		
Land Tenure and Ownership;	**Land administration in Sierra Leone is governed by a dual system of law, dispersed in about twenty statutes**	**This land tenure and ownership is relevance to this project as the land upon which this project is**	**The communities will take ownership of the project base on the method of implementation as**

	and regulations. In the Western Area of Sierra Leone, land tenure is governed by Property Statutes. Land is either State (publicly) owned or privately owned. **The right of the state to public land is inalienable and indefeasible.** **Rights of occupation over public land may be granted under warrant. The state has the power, conferred by the Unoccupied Lands Act, Cap 117, to take possession of unoccupied land.** **In the provinces, customary law co-exists with statutes. The recognition of the force of customary law in the provinces is established by section 76 (1) of the Courts Act 1965. Through customary law, ownership of land is vested in the chiefdoms and communities; and can never be owned freehold. Land always belongs to the communities under the different forms of tenure under customary law. This principle is established by the Chiefdom Councils Act as well as by Section 28**	**going to be implemented is been own by the chiefdom authorities base on Cap 117 of the Unoccupied Lands. Since this project is been implemented by the local communities, they will embrace it.**	**the local communities are at the for front of the decision-making process in the implementation of the project with a guide from the project staff.**

	(d) of the Local Government Act 1994.		
Fisheries Act, 2007	**The Fisheries Act of 2007 provides protection for both fresh and marine water species as classified by IUCN with the Sierra Leone water. It defines clearly where commercial vessels could harvest-Exclusive Economic Zone (EEZ) and where artisanal fisheries operations could exploit Inshore Exclusive Zone (IEZ).**	**Since this project will be implemented with water logging or inland valley swamp areas, there will be no fishing activities within the (EEZ) areas.**	**The ESMP construction will address the mitigation measure for the irrigation experts to following during the site's preparations.**
Wildlife Conservation Amendment Act, 1990;	**The Wildlife Conservation Act, 1972 and the Forestry Act, 1988 are the main legislations that deal with issues of Biodiversity Conservation in Sierra Leone. It provides for the establishment, conservation and management of National Parks, Game Reserves and other forms of Natural Reserves. Specific provisions dealing with the protection, management and conservation of these areas and the limitations therein are highlighted in Part II of the Act and include the following: Prohibition of all forms of hunting,**	**This policy is aligning with the implementation of this project by the involvement of the local people (youth, women, men etc). the capacity development and management component will address the issues in this policy in terms of training in wildlife and conservation for future generations.**	**The capacity of all the project communities will be develop and they will be able to adapt to or continue with this project after the life span of the RIAC project**

	capture and other activities leading to the injury of wild animals; Destruction of any plant form by any means including fire; Fishing within these protected areas; Erection of structures, construction of dams, forestry, agriculture, mining or prospecting activities; Introduction of species from outside of the boundaries of the reserve. The Wildlife Conservation Act of 1972 saw minor amendment in 1990 (known as the Wildlife Conservation Amendment Act), which included redefinition of terms, and other modifications and qualifications. For example, the prohibition of hunting of elephants which was limited to protected areas in the 1972 Act was extended to include all forests. The 1990 Amendment Act provided for change of name from Forestry Department to Forestry Division. Despite the minor amendment the Wildlife Conservation Act of 1972 along with the Forestry Act of 1988		

	continue to be the main legislature for biodiversity conservation in Sierra Leone. The Wildlife Regulations of 1997 however makes provision for the acquisition of licenses or permits for hunting in such designated areas and for other purpose as may be prescribed		
Legislation/Policy	**Summary**	**Relevance**	**Comments**
National Environmental Policy, 1994	**The National Environmental Policy (1994) seeks to achieve sustainable development in Sierra Leone through the implementation of sound environmental management systems which will encourage productivity and harmony between man and his environment. It also promotes efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of nationals, and serves to enrich the understanding of ecological systems and natural resources important to the Nation.**	**The ESMF provides a general option impact analysis with environmental and social criteria and an overall assessment on how to reduce, mitigate, and/or offset adverse risks and impacts and enhance positive impacts and monitor possible environmental and social effects associated with the RIAC sub projects.**	
Legislation/Policy	**Summary**	**Relevance**	**Comments**

National Land Policy (2015)	**The National Land Policy promotes the objectives of equal opportunity and sustainable social and economic development. The principles guiding the Land Policy include: (1) protecting the common national or communal property held in trust for the people; (2) preserving existing rights of private ownership and (3) recognizing the private sector as the engine of growth and development, subject to national land-use guidelines and rights of landowners and their descendants.**	**The RIAC recognizes the private sector as the engine of growth and development; hence, the ESMF subject to national land-use guidelines and rights of and owners and their descendant should be**	
Legislation/Policy	**Summary**	**Relevance**	**Comments**
National Water and Sanitation Policy (2010)	**This National Water and Sanitation Policy was developed in the light of the increasing challenges to the management of water resources in the country. The Policy covers water resources management, urban water supply and sewerage, rural water supply, hygiene and sanitation legal,**	**Because agro processing demands the use of water resources and adherence to good water, sanitation and hygiene practices, the RIAC should take into consideration the provisions of the National Water and Sanitation Policy.**	

	regulatory and institutional framework. **The Policy responds to the urgent need in Sierra Leone for integrated and cross sectoral approaches to water** **management and development as well as the provision of safe and adequate water and adequate sanitation facilities**	**The ESMF, if relevant, should conform to the requirement of the Policy.** **For SMEs activities that plan to abstract water from underground sources such as a borehole they will have to apply for an abstraction** **permit from the Ministry of Water Resources**	
Legislation/Policy	**Summary**	**Relevance**	**Comments**
The Forestry Act: 1988	**Section 18 of the Forestry Act stipulates that: The Chiefdom Authorities or Local Council of any chiefdom may conclude an agreement with the Chief Conservator of forests** **providing for the constitution as a community forest of any land within the chiefdom, subject to the approval of the District Officer for the District in which the land is situated.**	**RIAC may involve earthmoving to clear and construct agro processing facilities.**	**Using this Act as a guide in its operations, RIAC subprojects should** **study the vegetation and adopt prudent measures to minimize the clearing of vegetation and revegetate exposed surfaces.**
Legislation/Policy	**Summary**	**Relevance**	**Comments**
Forestry Regulations, 1989	**These are regulations that give effect to the Forestry Act, 1988. They state conditions under which a licence may be issued by an inspector of the**	**This gives clarity to the Forestry Act, 1988, providing the necessary regulations to give effect to the Act. RIAC activities should pay**	

	Forestry Division, to clear land in a classified forest for various activities. They also deal with conditions under which, deforestation of, or vegetation removal can be affected.	**heed to forestry rules and regulations.**	
Legislation/Policy	**Summary**	**Relevance**	**Comments**
The Wildlife Conservation Act, 1972	**The Wildlife Conservation Act of 1972 came into force to help regulate the utilization and protection of the wildlife resources of Sierra Leone. However, Section 3 of this Act is particularly to establish strict natural reserves for the protection, of the land, flora and fauna from destruction and injury by any activities or projects. The Wildlife Conservation Act of 1972 was amended 1990 (the Wildlife Conservation Amendment Act), this amendment included redefinition of terms, and other modifications and qualifications. Further to this, the wildlife regulations of 1997, makes provision for the acquisition of licence and permits for**	**The RIAC subprojects may be located within and around IVS areas in Pujehun and Bonthe District in Sierra Leone. Agro processing is prohibited in natural reserves. It must be ensured that such activities do not take place in such designated areas. Thus, a comprehensive EIA on such areas, habitats and species is imperative to document the RIAC's footprints for which the ESIA document will provide recommendations for the management of its impact.**	**IVS areas are homes to various endangered species, including a wide variety of endangered birds and Duiker.**

	hunting in designated areas. Any breach of the licence conditions can result in the licence being revoked by the Authorities concern.		
Legislation/Policy	**Summary**	**Relevance**	**Comments**
The Wildlife Regulations, 1997	**These regulations give effect to the Wildlife Conservation Act, 1972. They make provision for the acquisition of licenses or permits for various activities in wildlife conservation areas. They also outline conditions for revocation of such licenses.**	**Agro-processing is prohibited in natural reserves. It must be ensured that such activities do not take place in such designated areas. RIAC will carry out all its operations and activities in accordance with the acts, policies and regulations on conservation of wildlife**	**Current wildlife, legislation is widely recognized as out of date. The Wildlife Conservation Act of 1972 does not reflect the great advances in biodiversity conservation in the last forty-nine years, nor international obligations. Draft Wildlife Conservation Regulations of 1997 were not promulgated and do not reflect modern Conservation requirement. Given that wildlife management is currently part of the forestry sector, Forestry legislation is important, but again the Forestry Act of 1988 and its Implementing Regulations of 1990 are not compatible with modern forest or wildlife management.**

Legislation/Policy	Summary	Relevance	Comments
The Factories Act: 1974	**The Factories Act of 1974 addresses issues related to workers Occupational Health Safety in factories. A part of the slope stabilization activities fall within the definition of a factory based on the following conditions. Part II section 3(v)- "any premises in which mechanical power is used regarding the making or repair of articles of metal or wood incidental to any business carried on by way of trade or for purposes of gain". The Factories Act also includes machines safety, safe working conditions, sanitary amenities, periodic inspections, factory registration, and guidelines for reporting injuries, accidents and industrial diseases. The Act establishes the Local Council (LC) as the highest political authority in the locality and confers legislative**	**RIAC subprojects should maintain robust occupational health and safety policy that encompasses all the concerns in the Act and with consideration to international best practice. RIAC needs to observe internationally accepted Occupational Safety and Health principles (e.g., ILO Guidelines) to ensure optimal security and wellbeing within its working environment. The safety, health and welfare of all the workers associated with the proposed Project will need to be assured in line with all the provisions of this Act throughout the Project lifecycle. All the work places of the project beneficiaries would be required to be registered with the directorate of occupational safety and health**	

	and executive powers to be exercised in accordance with this Act. This Act in its First Schedule under Section 2 establishes the localities, namely: districts, towns and cities. Part II of this schedule also establishes the number of Paramount Chiefs in each LC. The Third Schedule establishes the functions devolved to the LCs.	**Public consultation and community involvement constitute a core element of MAFS operations. The implementation of the RIAC will be done in collaboration with the local council.**	
Legislation/Policy	**Summary**	**Relevance**	**Comments**
The Sierra Leone Local Content Agency Act, 2016	**Provides for the development of Sierra Leone Local content in a range of sectors of the economy such as industrial, manufacturing, mining, petroleum, marine resources, agriculture, transportation, maritime, aviation, hotel and tourism, procurement of goods and services; public works, construction and energy sectors; to promote the ownership and control of productive sectors in the economy by citizens of Sierra Leone; and to provide for other related matters.**	**The RIAC will create employment, respectively, the beneficiaries, especially SMEs are bound by this law to abide to its stipulations on employee management and relations**	

3.2 Africa Development Bank Environmental and Social Framework

The ADB ESF seeks to support borrowers develop and implement environmentally and socially sustainable projects as well as build capacity in the assessment and management of environmental and social impacts and risks associated with the implementation and operation of projects. The ESF contains environmental and social standards that borrowers must apply to all projects in order for the projects to be sustainable, non-discriminatory, transparent, participatory, environmentally and socially accountable as well as conform to good international practices. The ten (10) Environmental and Social Standards are:

v. **Environmental and Social Assessment (OS1)**
vi. **Involuntary Resettlement: Land Acquisition, Population Displacement and Compensation (OS2).**
vii. **Biodiversity and Ecosystem Services (OS3)**
viii. **Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials (OS4):**
V **Labor Conditions, Health and Safety (OS5):**

Table 3: Africa Development Bank OS standards that are relevant to the RIAC project.

Application of OS Standards	Yes	No
OS1: Assessment and Management of Environmental and Social Risks	X	
OS2 Involuntary Resettlement: Land Acquisition, Population	X	
OS3: Biodiversity and Ecosystem Services	X	
OS4: Pollution Prevention and Control, Greenhouse Gases, Hazardous	X	
OS5: Labor Conditions, Health and Safety	X	

The relevance of these Environmental and Social Standards to the various project components is discussed in the subsequent chapters

3.3 The Rice Agro-Industrial Cluster (RIAC) Through the Development of Rice Value Chain to Improve Livelihoods.

The Government of Sierra Leone has secured funding from the African Development Bank to finance the Rice Agro Industrial Cluster (RAIC) Project. The overall strategic objective is to promote food security in Sierra Leone through development of rice value chains to improve livelihoods. The specific objective is to transform the potentials of two contiguous stretches of agricultural land (totaling about 200,000 hectares) in Torma Bum and Gbondapie in the Bonthe and Pujehun Districts of Sierra Leone into breadbasket.

4,0 POTENTIAL PROJECT ENVIRONMENTAL AND SOCIAL RISKS

4.1. Positive Environmental and Socio-Economic Impacts

The Rice Agro Industrial Cluster (RAIC) Project is developed to improve farm productivity and farm production. Subsequently, the project will improve household incomes, stabilize and improve sustainable rural livelihoods, enhance food and nutritional security and contribute to poverty reduction through increased marketing of agricultural produce and minimize post-harvest losses in the targeted rice value chains clusters in Sierra Leone. The outputs of this project will translate into multiple positive economic and social outcomes whose indicators include:

- **improved environmental management through good agricultural production practices;**
- **reduced pollution through integrated pest management systems;**
- **increased agricultural productivity and production;**
- **increased value of agricultural produce values through agro-processing;**
- **increased marketing opportunities;**
- **minimized post-harvest losses of agricultural produce and subsequent increased food**
  and nutritional security;
- **improved trade in high quality agricultural produce both locally and internationally**
  with neighboring countries particularly Liberia and Guinea
- **improved household and community incomes hence improved living standards, food**
  security and improved nutrition through diversified food supplies;
- **improved transportation infrastructure and marketing as well as storage facilities for**
  the agricultural produce;
- **increased employment opportunities both directly and indirectly by people employed during the development works as well as those who will be employed in agro-processing, marketing, sale of farm inputs, etc.;**
- **improved agricultural production skills through training and extension services;**

- **enhanced environmental management skills through capacity building of staff involved in the project; and,**
- **improved food storage and processing infrastructure.**

4.2. Project beneficiaries

The RIAC interventions will provide support to small and medium-scale farmers, women, youth, vulnerable groups and institutions accessing improved information services from rice agro-business services as well as water irrigation systems and priority value chains. Furthermore, the MAF is currently moving towards a centralized farming model that brings together farmers in selected value chains to farm on well developed, large scale farms in centralized locations. The RIAC will target beneficiaries in ways that complements this model.

The RIAC project aims to also strengthen private sector actors involved in the selected value chains. These private sector actors will benefit from capacity building and business opportunities through matching grant arrangements. Appropriate beneficiary selection criteria will be developed to ensure that all interventions reach the most marginalized persons in the community; conform to environmental and social safeguard protocols and benefiting private sector actors meet high performing standards. Other benefiting entities will in Sierra Leone.

4.3. Mainstreaming of environmental, social and gender issues

The project intends to mainstream environmental, social and gender issues in its design. The target areas, just like other parts of Sierra leone, experience high levels of poverty and numerous environmental challenges caused by poor agricultural production systems and low agricultural production. Environmental challenges include deforestation, soil degradation, climate change, loss of biodiversity and land degradation. As such the project will include soil and water conservation programmes as part of land management practices for long term environmental sustainability.

4.4. Gender and Youth Aspects

The Design of the Project is systematically geared towards engaging women and youth and minimizing gender discrimination. As such the project will contribute to increasing gender inclusivity and equality and will not lead to unintended negative gender impacts such as exclusion. Gender perspectives have been integrated into project formulation in line with the Sierra Leone National Gender Strategy while taking due cognizance of the Bank's Gender Policy.

4.5. Involuntary resettlement

Currently, there are no indication that the project will lead to involuntary resettlement. It is assumed that the project sites will be areas already designated for agricultural production while development of market and agro-processing infrastructure will be done in areas already set aside as markets and for urban development. Any requisitions that will require relocation of population may not be massive to cause any serious resettlement alarm and as such will be negotiated as the need may arise.

4.6. Climate change

Sierra Leone faces some environmental and climate change challenges including deforestation, storms, flooding and mudslides which cause damage to farmlands, settlements, and livestock. Rice farming, accounting for the largest share of agricultural GDP and 42 percent of the average person's caloric intake. It is also affected by climate-induced post-harvest losses due to poor infrastructure and flooding, which disrupts the food supply chain. The project is therefore classified in Category 2 according to the Bank's climate safeguard system, meaning that the project is vulnerable to climate change. Considering this, the project will integrate climate-change resilience initiatives focusing on reducing the inundation of rice fields, climate-induced effects and design.
Farmers will be encouraged to adopt climate-smart agriculture inputs and practices including adoption of high yielding seed varieties, water catchment and land management, improved farming technologies and climate risk analysis.

The project will also provide processing technologies/Mills. It will also carry out specific trainings to enhance the capacity of SME on climate risk management and mainstreaming in their business plans.

4.7. Potential Negative Impacts

The RIAC rice production schemes (youth and women) will partly be implemented through irrigation. This will include the use of boreholes to irrigate the farms, construction of new dams where necessary, rehabilitation of existing dams, and by impounding rice perimeters. During construction, equipment such as a heavy mobile plant (e.g., graders, bulldozers, excavators) will be used where green fields will be converted into rice growing perimeters.
In operation, the activities will include the abstraction of water from a local water source (in rice irrigation, this will be mainly from nearby water bodies as is usual with most rice irrigation projects); water storage in containment areas such as water tanks or reservoirs, distribution of water to and within the rice fields through canals, through reticulation pipes; and control and treatment of water runoff from these areas.
During decommissioning, roads that were used during the construction and operational stages of the Project to access the rice perimeters farms should be decommissioned and rehabilitated in accordance with a site-specific closure plan developed according to good international practice. The decommissioning phase will include site clearance, removal of all equipment, and appropriate disposal of waste materials, soil ripping, and re-grading where necessary.

4.7.1 Impacts associated with the use of agro-chemicals and measures

Increased food production for local farmers is one of the main manifestos promised of His Excellency the President of the Republic of Sierra Leone H.E Julius Maada Bio. The development and implementation of the proposed RIAC project, and agrochemicals (mainly fertilizers and pesticides) will be used to achieve higher yields per unit area. However, there are environmental concerns associated with the use of agrochemicals, including undesirable soil and water contamination, acidification of soils, human health risks, pest resistance, damage to non-target organisms, and secondary pest problems.
However, the issues pest management will be address in the Environmental Management plan before the commencements of the project implementation phase. In this regard, careful selection of the type of agrochemicals and management of their use (timing, dosage, mode of application, etc.) is required to reduce to acceptable levels the environmental risks they pose while providing the needed benefits for increased production with lower financial and health risk costs. The Project should be explicit about the pesticides it proposes; unregistered, restricted-use, or experimental-use pesticides should be avoided unless their use has been reviewed and approved by the Food and Agriculture Organization (FAO).

4.7.1 Impacts associated with climate change and measures

This will help identify appropriate adaptation actions, including relevant activities for each subproject, as well as the capacity building needs for farmers. Following the CSS procedure, the Project will be classified; usually, this type of project is classified as Category II, indicating that it will be affected by climate change impacts.
Climate change impacts that could be experienced in the course of Project implementation will include erratic rainfall patterns, prolonged dry spells, heat waves, and flooding, which cause infrastructure damage, crop failure, and ecosystem desiccation through increased salinization in freshwater, wetland and mangrove ecosystems. Irrigation demand will increase in the face of decreasing rainfall and increased evapotranspiration, placing additional pressure on irrigation systems, especially where they involve use of pumping machines.
On the other hand, soil erosion from increased rainfall intensity, particularly from upland areas into the lowlands, will affect watershed sustainability and lead to sedimentation in reservoirs, with impacts on the operation of facilities. Some other impacts could include inundation of tidal irrigated fields mainly from three sources; increase in run-off from the upland into irrigated fields; increase in water level and volume from the river into the irrigated fields, and rainwater falling directly into the fields. Thus, inundation could lead to loss of production in the rice perimeters.

The Project will ensure that the crops and infrastructure are climates resilient by integrating into its design climate change resilience initiatives focusing on reducing the inundation of rice fields. The initiatives will involve changes in the engineering designs of some of the tidal perimeters to control run-off from the upland into the rice fields and to release the overflow from the water bodies and direct rainfall away from the rice fields.

The engineering designs will also protect ecosystems at risk from other natural or anthropogenic hazards.

In addition, the Project will encourage farmers to adhere strictly to the farming calendar to mitigate the inundation of crops; adopt improved farming technologies and facilities which will minimize post-harvest losses; include capacity building for farmers to make them responsive and able to analyze risks properly. By improving access roads, the Project will reduce transportation costs and thus improve farmers' incomes to reduce poverty and enhance the resilience of the farmers.

The identified negative impacts anticipated include:

- **vegetation, habitat and biodiversity destruction and loss during the development and construction of markets, agro-processing infrastructure, storage facilities and transportation infrastructure;**
- **generation of solid wastes as a result of excavations during construction works;**
- **compaction of soils and destabilization of the geological balance during infrastructure development;**
- **solid waste and wastewater generation due to increased populations in construction sites and market places;**
- **dust, air quality and noise pollution during construction works arising out of construction works and transportation of both construction materials and wastes;**
- **threats of occupational health and safety, especially during construction works;**
- **soils, rivers and wetlands pollution from increased use of agro-production chemicals due to increased agricultural production activities;**

threats of transmissions of HIV/AIDs and other communicable diseases due to increased social interactions and congregations. The table below summarizes the potential negative impacts of the RIAC project.

4.8. Analysis of Project Alternatives

This ESMF study considered possible alternatives of the RIAC project. These included the No Project alternative, the alternative sites and activities as well as the different related products, materials, and technologies. A cost benefit analysis can also help with the selection of the best alternative.

This alternative implies the project does not proceed thereby maintaining the status quo. The status of the environmental resources neither improves nor worsens since the state of the resources is not interfered with at all. However, the No Project Alternative implies that all the positive impacts are not realized. The 'No Project Alternative' has various negative and possibly long-term impacts in the target States which include:

- **The local populations continue to suffer from lack of markets for their agricultural produce;**
- **no incomes hence sustained poverty levels;**

- **no infrastructure improvement;**
- **low agricultural production;**
- **No employment opportunities;**
- **continued food insecurity;**
- **limited agricultural production skills;**
- **continued post-harvest losses;**
- **low efforts to improve the environment through climate smart agriculture.**

Alternative project location seems to have the same impacts as the No Project Alternative. It means transferring project benefits elsewhere leaving people of these areas in their current situation hence not contributing to improvement of their well-being.

Table 4: Relevant Safeguards and Their Applicable Tool

Project Component	**Applicable E&S document and coverage**
Project as a whole	**ESMF and ESCP**
Rehabilitation and improvement of irrigation schemes	
• Establishment of IA • Design and rehabilitation of selected irrigation schemes with contracted civil works for the lining and flow regulation structures) • Demonstration of on-farm water management practices and establishment of farmer field schools • Construction of social structures including water points. • Distribution of kitchen garden kits • Promotion of horticulture on irrigated land	**Preparation and disclosure of ESIA and ESMP** **Labor Management Procedures (LMP) for working conditions and management of worker relationship, protection of work force, management of contractor/community/primary supply workers; GRM together, OHS plans inclusive of mitigation measures for COVID 19 will be required as part of ESIAs. OHS mitigation measures will be discussed in the Sub-Project ESMPs** **Resource efficiency in use of energy water and resources including application of Pollution prevention and management of air and water pollution, management of pests and pesticides through Pest Management Plan (PMP) will under as part of Sub Project ESIAs or ESMPs** **Risk Communication and Community Engagement (RIAC) Action Plan guidance. Sub-Project ESIA/ESMPs to include** • **Construction design and safety standards: Third party safety procedures in construction of irrigation channels including from potential exposure to operational accidents, natural hazards and weather events (flooding of drainages)** • **Risk disclosure and precautionary measures on the principle of universal access** • **Traffic and road safety assessment and measures as part of ESA**

	monitoring of incidents and accidents • **Assessment of impact of the project on eco-system services** • **Health safety guidelines: Exposure to health issues from drinking of water (communicable and non-communicable diseases) etc.** • **(RIAC) and preparation of Emergency Response Plans (ERP)** **Disclosure of security arrangements and following best practices for engagement, training, rules of conduct, equipping and monitoring of security personnel (hired / government security).** **Project site specific Biodiversity Management Plan may be required** **Project site specific Cultural Heritage Management Plan may be required**
Watershed Management	
• Watershed Management Planning • Soil and water conservation measures (contour trenching and bonding) • Grassland/ pasture management • Forestry and agro-forestry • Horticulture • Community nurseries • Water harvesting structures (ponds, check dams etc.) • Climate resilient agriculture through introduction to conservation farming and extension services	**Cumulative Impact Assessment as impact will be happen after project closure, ESIA for larger watersheds, ESMP for other watersheds.** **Labor Management Procedures (LMP) for measures to deter child/forced Labor, working conditions and management of worker relationship, protection of work force, management of community/primary supply workers; GRM, OHS and application of EHSs for working in remote areas, Work Based GRM–will be put in place.** **Resource efficiency in use of energy, water and resources including application of EHS, Pollution prevention and management of air, water and soil pollution** **Risk Communication and Community Engagement (RIAC) Action Plan** **Sub Project ESIAs/ESMPs to include**

	• **Construction design and safety standards: Third party safety procedures in construction of water harvesting structures including from potential exposure to operational accidents, natural hazards and weather events (flooding of ponds, landslides, grassland fires)** • **Risk disclosure and precautionary measures on the principle of universal access** • **Traffic and road safety assessment and measures as part of ESA ; monitoring of incidents and accidents** • **Assessment of impact of the project on eco-system services** • **Health safety guidelines: Exposure to health issues from drinking/use of water (communicable and non-communicable diseases) and poising of ponds by terror groups etc.** • **Risk Hazard Assessment (RHA) and preparation of Emergency Response Plans (ERP) specially for COVID spread** **Disclosure of security arrangements and following best practices for engagement, training, rules of conduct, equipping and monitoring of security personnel (hired / government security)** **RF (Resettlement Framework) may be required to meet site specific requirement** **Project site specific Biodiversity Management Plan may be required** **Project site specific Cultural Heritage Management Plan may be required**
Rice Production and Supply Chain Management	

1: Emergency Seed Distribution 2: Seed production and supply • Support to a system for rice seed distribution • Capacity building of RIAC staff, • Training for project management team and board members on the strengthening of market linkages between SMEs and farmers	**SESA - strategic assessment for its impact on/ associated with national policy and programs on seed distribution** **Pest Management Plan (PMP) as part of RIAC for use of pesticide on seeds used for distribution to farmers.** **preparation of ERP for locust attack** **Disclosure of security arrangements and following best practices for engagement, training, rules of conduct, equipping and monitoring of security personnel (hired / government security)**
3: Support for food processing and distribution • Grants and technical assistance to private sector for critical food value chains • Support to strengthen the policy, institutional, and coordination framework for critical food value chains • Communal supply chain infrastructure (local storage and processing centers)	**Sectoral ESMP for food processing sector.** **Project will ensure that all beneficiary institutions who receive TA under this component will ensure compliance to national labour laws and the local content requirements of Sierra Leone and the AFDB.** **Equipment and infrastructure (local storages) procured as grant to conform to energy, water and resource efficiency standards and pollution prevention and management of air, water and soil pollution norms of the Government of Sierra Leone.** **Community health and safety risk assessment to be conducted for equipment and supply chain infrastructure support; Infrastructure and equipment design and safety standards to be followed as per national legal requirements.**

5.0 Environmental and Social Baseline

5.1Biophysical

This chapter describes the overall baseline condition of Sierra Leone in terms of biophysical environment, as well as the socio-economic context. Existing environmental and socio-economic conditions will, in many cases, provide a basis for predicting potential impacts of project components and sub components.

The total land area of the country is approximately 72,000 km^2. Sierra Leone is divided into arable agricultural land (60%), pastural (18%), mangrove and inland swamps (8%), and forest under protection and management (4.5%) and others (9.75%). The country is divided into three distinct physiographic regions running from the north east to the south west viz: the coastal plains, interior plains and the interior plateau. The coastal plains are low lying areas comprising mostly of swamps and extending 30 km inland from the coast.

Sierra Leone has a wet tropical climate, marked by distinct wet and dry seasons. The wet or rainy season is from May to October and the dry season from November to April. Both seasons may have some variations in their commencement and duration. The wet season has an average rainfall of 3,000 mm, with coastal and southern areas receiving from 3,000 to 5,000 mm annually and inland areas between 2,000–2,500 mm in the drier areas of the north–west to the north–east.

Air pollution is a major problem but no significant studies on air pollution have been carried out within rural areas in Sierra Leone. Major sources of air pollution in Freetown is from vehicular exhaust emissions, industrial activities, sand and quarry industries, road and building industries, all off which produce enormous amounts of pollutants in their vicinity.

Major sources of noise pollution include traffic noise and road construction. With increased road traffic, noise will affect all those living along the roads. Due to power cuts in many rural area's, electric generators have now become significant sources of noise pollution. In many instances industrial generators are used in residential areas hence causing a lot of noise pollution. Sierra Leone is not a water deficient country. About 4,837.8 km^2 of Sierra Leone is covered by wetlands with vegetation that is typically of

freshwater swamp forests, riparian and mangroves. The forest ecosystems can be divided into closed forests and transition or secondary forests. The closed forests can further be sub-divided into evergreen and semi-deciduous forests. The area of forest in the country has been reduced considerably, with less than 5% of the original forest remaining in isolated reserves. Mangrove woodlands occupy 47% of the Sierra Leone coastline, covering a total area of approximately 200,000 ha.

Although Sierra Leone is a tropical country, much of its rural population do not have access to clean and pure potable water supply. Agriculture is the largest water consumer. Despite the efforts to improve the situation, water shortages and quality degradation are common problems in Sierra Leone.

Description of the Sewa River

The Sewa River, river, the most important commercial stream in Sierra Leone, West Africa. Formed by the junction of the Bagbe and Bafi rivers, which rise in the northeastern part of the country near the Guinea border, it flows 150 miles (240 km) in a south-southwesterly direction and drains an area of 5,460 square miles (14,141 square km). The Sewa joins the Waanje River 30 miles (48 km) east-southeast of Bonthe to form the Kittam, a distributary that empties into the Atlantic via the Sherbro Strait. The Sewa's upper reaches are extensively panned for diamonds; its basin from Sumbuya northward through the area around Yengema, leased to the Sierra Leone Selection Trust, is also worked for diamonds. South of Sumbuya, which is the head of navigation (42 miles [68 km] upstream from the confluence with the Waanje), piassava (exported for the manufacture of brooms and brushes) and swamp-rice cultivation are important commercial activities.

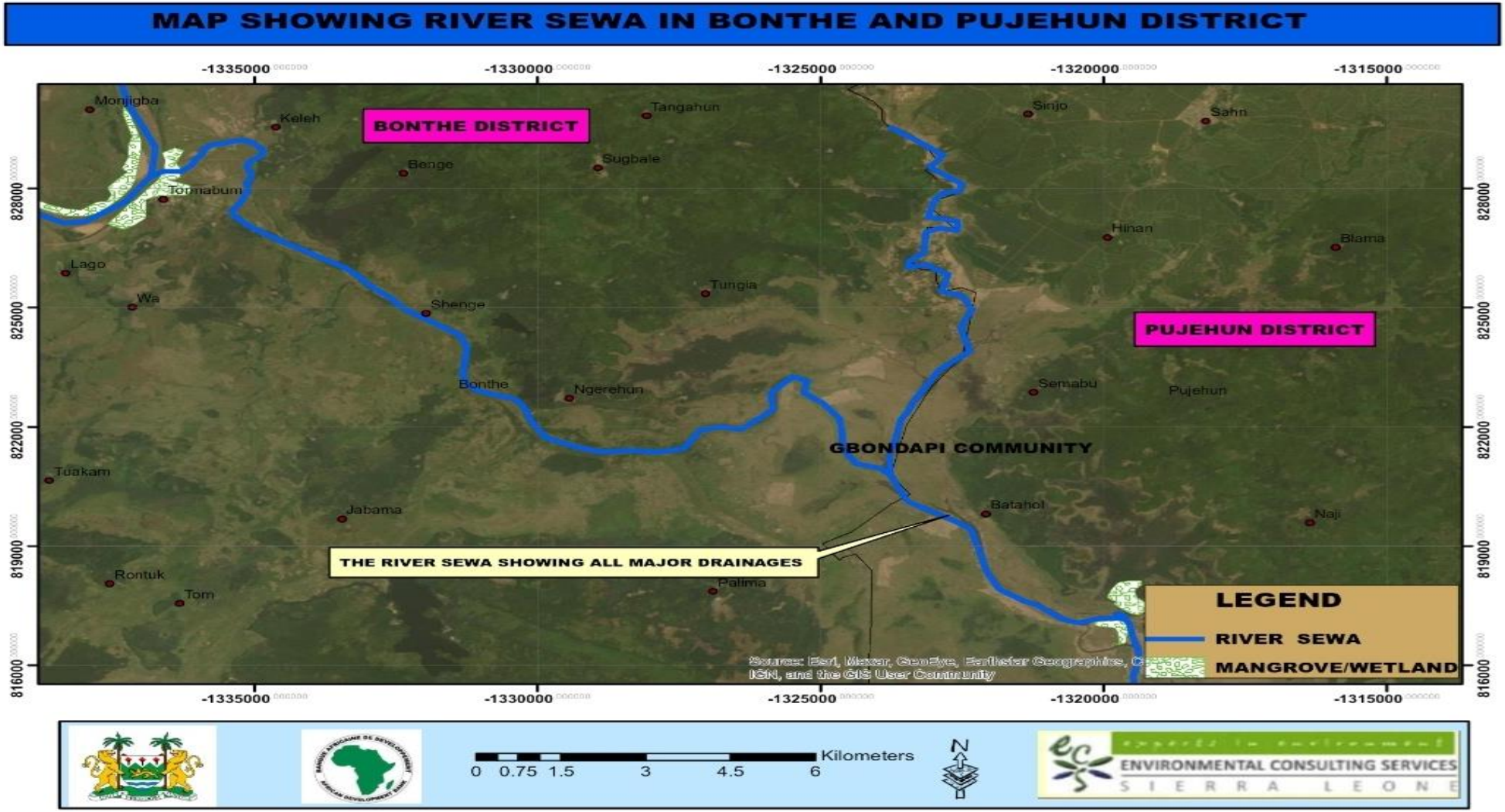


Figure 2 Showing the Sewa River with its Drainages

Soils of the Project areas

The soil resources of Sierra Leone can be categorized into five orders (and several series): Oxisols, Inceptisols, Entisols, Ultisols and Spodosols. Oxisols are the most widespread followed by Inceptisols and Entisols. Ultisols and Spodosols are also present but are rare. The soil types that are found within the project communities are (Bonthe and Pujehun) is Oxisols, Ultisols and Spodosols are the soil types that can be found within the project areas.

The integrated biodiversity assessment tool (IBAT) screening indicated 1818 IUCN Red List of threatened species, 9 national protected areas and no key biodiversity areas within 50km of the Gbondapie area in the Pujehun District. The IBAT screening indicated a total of 1862 IUCN Red List of threatened species, 13 national protected areas and 1 important bird and biodiversity area within 50km of the Tormabum project area in the Bonthe District.

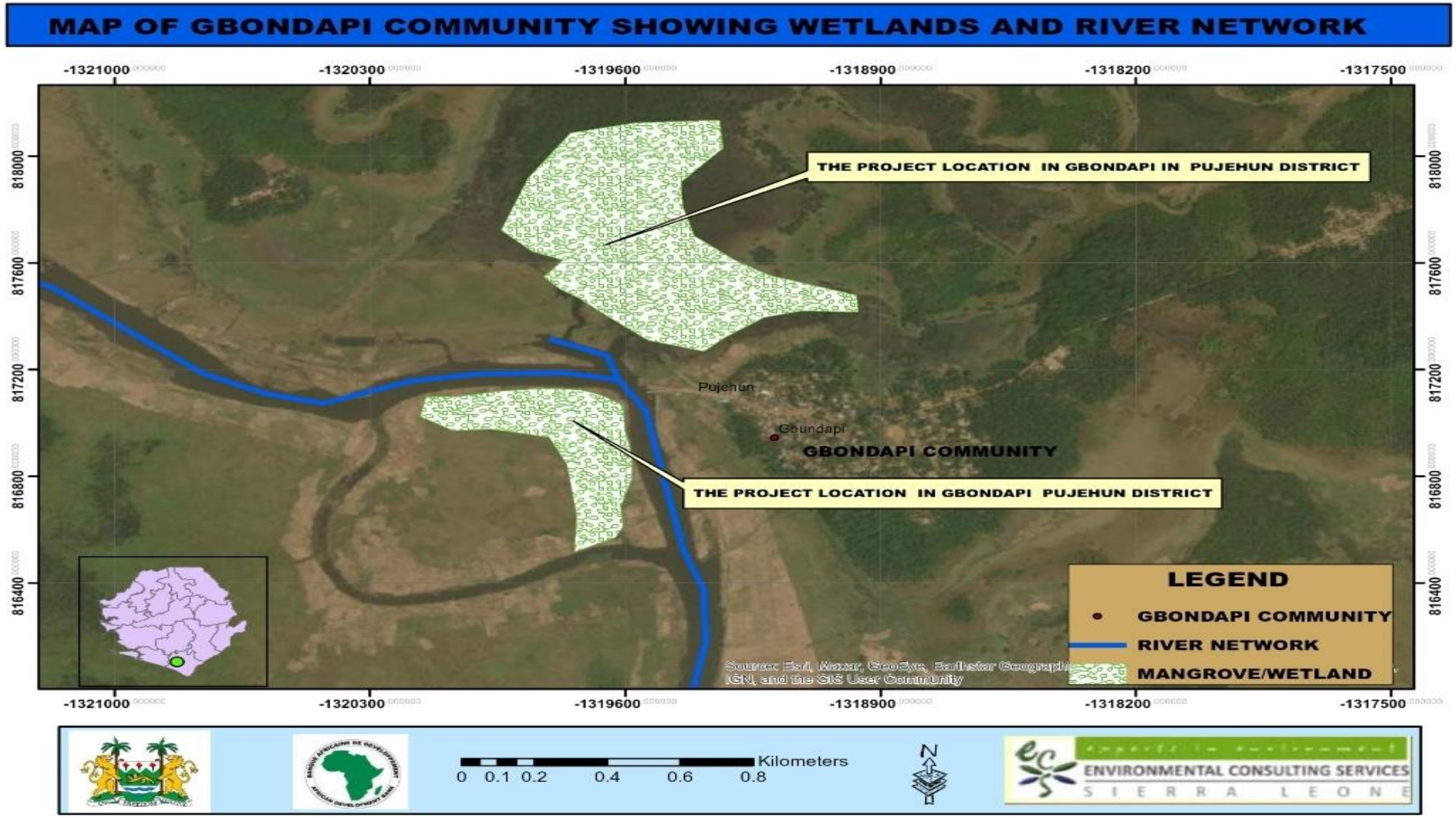
According to IBAT, the Tormabum and Gbondapi wetlands and fresh water areas indicated 21 species that were found to be threaten base on the IUCN red list category and the 8 species out of the 21 species were found within the sub-site basin whiles the remaining 13 species were found downstream within the (-100km) areas.

The results of the up-stream species that are threatened is 8, and all of them are found within the Sub-basin.

There were also 77 species of migratory species that were found within the two project sites. and they were found up stream within the sub-basin (37 species) 40 species were found downstream (-100km).

As for the species richness information with regards to the number of fresh water species that were found within the basin, a total of 328 species were recorded of which 2 were listed as critically endangered, 2 as endangered and 4 as Vulnerable. Refer to Figure 3, which shows the Map of the Tormabum and Gbondapi Wetlands.

Figure 3: Map of Tormabum and Gbondapi Wetland Areas



5.2 Socio-economic Setting

Administratively, Sierra Leone is divided into various administrative areas/units. The administrative structure starting from the top to the bottom is: Country, Province/Area, District,

Chiefdom, Section and Village/Town: Eastern Province, with its Headquarter in Kenema; Northern Province, with its Headquarter in Makeni; North-western Province, with its Headquarter in Port Loko, Southern Province, with its Headquarter in Bo; and Western Area, with the Capital City (Freetown). Sierra Leone's civil war (1991-2002) eroded infrastructure and human capacity throughout the country. Efforts made in the post conflict phase to improve the health sector suffered a major blow in the Ebola crisis (2014-2015), which created an additional burden on the health sector and the country. The lack of domestic resources in Sierra Leone, one of the world's poorest and least-developed countries, leaves the country dependent upon international support in terms of finance, technology and other forms of aid. Sierra Leone remains largely dependent upon its mineral's economy, including iron, diamonds and rutile, which are major sources of foreign exchange.

Sierra Leone suffer from mass poverty (more than half of the population lives under conditions of "severe" poverty), widespread malnutrition, high infant and child mortality rates, low life expectancy, deficient infrastructure, a poor education system, and insufficient availability of basic medical services to cope with tropical diseases malaria, cholera, tuberculosis, HIV/AIDS, EVD and Covid 19. While much of the population is poor, there is a high level of gender inequality, with women affected far more dramatically by the consequences of poverty than are men.

The Sierra Leone 2015 Population and Housing Census, conducted in December 2015, indicates that the population grew from 4,976,871 in 2004 to 7,092,113 in 2015, registering an average annual growth rate of 3.2 percent. Males represented 49.1% of the total population and females 50.9%.

The 2015 PHC results reflect the demographic profile of a young population, where 40.9 percent are less than 15 years, and only 3.5 percent are 65 years and above. The working age population (15-64 years) represents 55.6 percent. Agriculture has been the backbone of the Sierra Leone economy for several decades. It contributes 40 to 50% of GDP, about

10% of exports, and provides employment to approximately two-thirds of the population. Whilst
agricultural growth has significant poverty reduction effects, the sector is characterized largely by smallholders, practicing mainly subsistence agriculture.

Sierra Leone has an extensive coastline with a sizeable continental shelf (covering an area of over 25,000 square kilometres and a width of up to 140 kilometres in the north) that is fed by substantial rivers and rainfall, providing the basic elements for extremely productive marine fisheries.

Based on these resources, the fisheries sector provides direct employment to an estimated 100,000 persons and indirect employment to some 500,000 persons (almost 10 percent of the population). Sierra Leone is reasonably well endowed with energy resources, particularly biomass energy (forestry), hydroelectricity and other renewable energy sources (e.g., solar energy).
There is an extensive road network but most are poorly maintained and unsurfaced. There is also an extensive network of rivers and tributaries that provide a large hydroelectric power potential conservatively estimated at 1,200 MW. Energy consumption in Sierra Leone is dominated by biomass, mainly in the form of fuel wood and charcoal which accounts for over 83% of energy used.

Imported petroleum products are the next largest source of power at approximately 15.8%. Grid-generated electricity accounts for the remainder of the power supplied to the country's citizens. Currently, the electricity subsector in Sierra Leone faces challenges with less than 13% access.
In 1993 the government adopted a four-stage approach 6-3-3-4 education system and created the National Commission for Basic Education. The 6-3-3-4 education system is composed of 6 years of formal primary education, 3 years of junior secondary school (JSS), 3 years of senior secondary school (SSS) and 4 years of tertiary level education (colleges, universities, polytechnics and teacher training). There are Seven Universities in Sierra Leone.

5.3 Sierra Leone administrative boundaries

Land tenure in Sierra Leone is characterized by a dual ownership structure. In the Western Area

including Freetown, private ownership of land also known as freehold tenure is recognized. Land in the rest of the country (i.e., the Provinces) is held in communal ownership under customary tenure and is controlled by traditional chiefs who administer it on behalf of their communities in accordance with customary principles and usage.

The Ministry of Health and Sanitation (MoHS) is the major health care provider in Sierra Leone and operates all government health facilities in the country. The public delivery system starts from the peripheral health units (PHU) which are recognized and standardized. At the base, community health workers (CHWs) work out in the community providing a fixed package of health promotion and health care services, as well as conducting surveillance activities.

5.4 Socio-Economic Baseline

Sub-project specific baseline will be studied and recorded in the baseline survey; the sub-project sites are identified. Following is the assessment of macro-baseline for the country.

The agriculture sector is largely dominated by smallholder farmers, who have limited access to productive assets and are vulnerable to shocks such as weather-related disasters. Smallholder producers are specifically vulnerable to shocks because they have limited access to improved technologies, production practices, and extension services. They resort to unsustainable use of natural resources such as land, pastures, and forests to secure a livelihood in times of crisis. It is expected that the on-going COVID-19 pandemic and climatic variations will cause a loss of incomes in rural areas, affecting seasonal laborers and those farmers who supplement their household income through off-farm labor. It has already affected farmers' purchasing power and has hindered the procurement of agriculture inputs for the planting season. In addition, the nation-wide lock down and import disruptions affected the free flow of input supply chains and restricted farmers' access to production inputs such as seed, fertilizer and basic technical services that were already limited.

5.5 Potential Environment and Social Risks/Impacts and the Mitigation Measures

The proposed interventions under Sub-Component 1.1, 1.2 1.3, 2.2, and 2.2, will involve the rehabilitation/extension of irrigation schemes, watershed conservation/management, construction of rain harvesting and soil conservation infrastructure such as, seed production and distribution as well as the establishment of new processing and storage centers. In addition, the project will support agro-processors (Milling facility) with infrastructure and equipment to increase production and distribution of rice. These project interventions are expected to generate the under listed beneficial environmental

and social impacts:

v. **The project will minimize the adverse effects of COVID 19 on food production and supply systems and enhance food security amidst the COVID 19 pandemic;**

vi. **During the construction phase, employment opportunities will be directly available for unskilled, semi-skilled and skilled workers such as drivers, laborers and technicians as well as engineers to be engaged by the PIU of the Ministry of Agriculture and Forestry, Contractors and Sub- contractors on sub projects such as the construction of water conservation structures like, processing and storage centers and rehabilitation/extension of irrigation schemes; Employment and income earning opportunities will also be opened up for Seed Producing Entities and rice Mill owners and operators and ancillary services that support these entities such as those into haulage during the operational phase. It is also expected that the newly constructed processing and storage centers will also attract workers such as loading crew, security men and supervisors;**

vii. **Training programs for farmers, Irrigation Associations members, millers and other stakeholders on issues such as water conservation, that will be delivered under the project will also improve capacity of persons in these categories to better deliver their services and become more productive.**

Table 5: Potential Adverse Environmental and Social Impacts/Risks and Mitigation Measures –During the Design/Planning Phase

Impact/ Risk	Impact/Risk Description	Mitigation Measures
Selection of unsuitable sites for various infrastructure	**The siting of facilities, if not carefully planned and agreed upon with stakeholders will lead to underutilization of the infrastructure and high construction cost when completed. Sites may also be close to environmentally sensitive areas**	• **Site selection for the various infrastructure will be undertaken by the PIU, Project manager in consultation with national, provincial and local level officials as well as other stakeholders such as Councillor's, Members of Parliament for the said project locations, the Irrigation Engineers from the Ministry of Agriculture and forestry, women groups, farmers etc** • **All sites should be screened for their environmental and social suitability prior to their approval** • **Grievance redress systems will be set up to provide avenues for groups to bring their grievances to the attention of authorities for speedy resolution and feedback**
Selection of rice Mill and Seed Producing Entities	**Lack of a selection criteria for the selection of private sector Mills and Seed Producers can lead to complaints of unfairness and favoritism as well as the selection of firms with poor environmental and social performance records**	• **RIAC shall come out with a selection criterion for rice Mills and Seed Producers for the Bank's approval** • **The selection criteria shall be prepared in consultation with National Procurement Authority of Sierra Leone.** • **The selection criteria shall include social and environmental criteria such as worker relationship and registration with the MAFs Ministry,** • **Environment and Social Due Diligence should be undertaken to ensure that Seed Companies and Mill conform to the requirements of the bank.**
Design Flaws and Poor Supervision of Civil Works	**Rice Mills, Processing and storage facilities with poor ventilation, no firefighting installations and other design flaws will contribute to post harvest losses and health problems for workers.**	• **All facilities will be designed and supervised by competent professionals e.g., Architects and Engineers together with agronomists using the approved Building Code;** • **All design drawings for the proposed irrigation schemes, rain harvesting and soil conservation infrastructure, processing and storage centers to be constructed will be vetted and approved by the appropriate professional and authorities (e.g., Ministry of Agriculture**

	Poorly designed processing and storage centers as well as rice Mills may exclude Persons Living with Disability from accessing them **Poorly designed irrigation schemes can lead to excessive water losses and/or waterlogging** **Structural failure due to poor design and supervision of irrigation systems, processing and storage facilities as well as rain harvesting infrastructure can lead to loss of life and property as well as crop failure**	**and forestry and RIAC field staffs)** • **All relevant permits will be obtained prior to the commencement of works on the proposed processing and storage centers from the relevant Authorities.** • **Hand washing facilities would be provided at the entrances of the Processing and storage centers to be established.** • **All rice Mills selected for the Project as well as the processing and storage centers to established will be equipped with fire extinguishers and other fire-fighting equipment and designated Assembling Points will be marked and disclosed** • **Ramps as well as disability and female friendly toilet facilities will be provided in the storage and processing centers to be established.** • **Construction materials will be approved by the RIAC/ PIU Project team** • **In case earthen are to be constructed, they will be lined with clay material to minimize seepage** • **Gates and other installations that regulate the water flow within the irrigation system will be installed as part of the rehabilitation and extension of the irrigation schemes**

Table 6: Potential Adverse Environmental and Social Impacts/Risks-Construction Phase

Potential Impacts/Risks	Impact/Risk Description	Mitigation Measures
Exposure of Employees of Contractors and Sub-Contractors to PIU/RIAC Project team	**Employees of Project Contractors, Sub-contractors and Third-Party Contractors from different parts of the country congregating to work on various sub projects pose a risk of increase in the spread of HIV/AIDs and COVID 19**	• **A detailed work program including pandemic emergency preparedness and response plans will be prepared for each of the civil works allowing for rotation of workers and other measures that avoid overcrowding on site, by contractors; All employees of Project Contractors and Sub-Contractors will be made to undergo sensitization on COVID-19 preventive measures and symptoms based on the WHO Guidelines for Rational on the use of Personal Protective Equipment (PPE) for Coronavirus Disease (COVID-19), Getting the Workplace Ready for COVID-19 etc.; as part of the OHS training** • **Accommodation will be provided for all site workers to meet the WHO guidelines on Water, Sanitation, Hygiene, and Waste Management for the COVID-19 virus with spacious kitchens and canteens with good ventilation** • **Workers accommodation will be close to sites as much as possible to minimize interaction with the general public;** • **Site workers will be engaged in such a way that they will complete their assignment before returning home;** • **Persons including workers and visitors entering or leaving the site will be documented in a log or visitors book as appropriate;** • **Daily basic health screening will be undertaking for all workers and visitors on site e.g., Checking and recording temperature** • **Daily Tool box meetings will include briefing on HIV/AIDS and COVID-19 specific issues including symptoms, cough etiquette, hand hygiene and distancing measures and reporting symptoms of**

Potential Impacts/Risks	Impact/Risk Description	Mitigation Measures
		HIV/AIDs, Hepatitis -B and COVID 19 to the Health and Safety Officer on site, using demonstrations and participatory methods. This will include cleaners and security persons on site • **Workers from affected areas or who have been in contact with an infected person upon returning to site will be made to self-isolate for 14 days and the relevant health authorities will be notified.** • **Sick workers will be prevented from entering the site and referred to local health facilities** • **All workers will be made to sign a Code of Conduct with a pledge to submit to HIV/AIDs, Hepatitis-B and COVID 19 precautionary measures and sanctions for breaching the measures;** • **Posters and other education/illustrative materials on HIV/AIDs, Hepatitis-B and COVID 19 and other infections will be pasted at advantage points on site and given to workers and visitors;** • **Site workers will be provided with toilet, hand washing facilities and disinfectants on site as well as at their accommodation e.g., soap, laundry services, disposable paper towels and closed waste bins etc.** • **All Sub Project Contractors and Sub-Contractors will be made to recruit qualified Occupational Health and Safety Supervisors/Officers** • **All Occupational, Health and Safety Supervisors/Officers recruited by Sub Project Contractors and Sub Contractors will be trained and sensitized to refer all suspected cases of HIV/AIDs, COVID 19, Hepatitis-B, and other infections to the nearest health facility, detecting symptoms of COVID 19, AIV/AIDs and Hepatitis-B etc. based on the WHO guidelines.**

Accidents involving residents of Catchment Communities	Farmers and visitors to various sub projects sites (rehabilitated irrigation schemes, primary processing and storage construction sites) can slip and fall into trenches and pits dug as part of the drain extension, building foundations, sceptic tanks and other construction purposes. Such persons may also be at risk of getting injured or dying through cuts, hits and burns arising out of negligence by site workers and poor housekeeping on site. Cattle and other livestock belonging to residents of catchment communities may fall into open pits and trenches dug as part of the extension of the drainage's or drains and building foundations etc. Haulage trucks and construction vehicles could also be involved in accidents leading to injuries, fatalities and/or loss of property of residents of catchment communities including livestock.	• Warning, mandatory, prohibitive and directional signs shall be provided along the routes and other working zones to guide site workers and visitors who will access the project zone during the construction phase • In addition to the formal vehicle registration numbers, all construction vehicles, haulage trucks and equipment shall be clearly embossed with two-digit identification numbers in front, at the back and sides for easy identification • Contractor(s) shall emboss the company's phone contact boldly on all vehicles and equipment • Systems will be put in place for accident reporting, emergency preparedness and protocols for dealing with accidents • A GRM will be set up as part of the project implementation to receive, investigate and resolve grievances and provide information to the general public • Contacts of numbers of the Grievance Redress Committee will be pasted at vantage points in the communities and health facilities and announced on radio in the local languages • Designated crossings will be provided for human beings and livestock within the network • Access roads will be provided along primary roads • Occupational Health and Safety (OHS) measures should be thoroughly considered by the OHS focal points and/or site supervisors of the contractor(s)

Incidence of Ponding	**The cut and fill activities during land preparation can also compact the soil and breakdown the soil structure. This would potentially reduce rainwater percolation leading into ponding**	• **Backfilling trenches immediately after the pipes have been laid** • **The Contractor should pump out water that collects in trenches daily** • **The Contractor should plan activities taking into account the weather forecast**
Accidents involving Direct Project Workers and those of Project Sub-Contractors	**Accidents such as cuts, burns, hits, slips and falls may occur as workers load and offload equipment and materials at the various sub project sites, during trenching/digging and back filling for the constructing of storage and processing facilities septic/holding tanks and/or extension of waterlines to selected facilities. Other sources of accidents are fixing equipment and fittings in the various storage and processing centers to be established. These may occur because workers are negligent, refuse to wear PPEs, poor housekeeping and lack of signage on site and/or equipment failure. These accidents can cause death,**	• **An OHS plan shall be prepared for each sub project** • **OHS training will be mandatory for employees of Project Contractors and Sub-Contractors** • **Lining work zones across roads and pipe routes with caution tape** • **Levelling the sides of the trenches to prevent accidents** • **Personal Protective Equipment (PPE) shall be supplied to all workers** • **Reward and sanction regimes for workers who use and do not use appropriate PPE respectively shall be instituted by the Contractor(s) covering all project workers including employees of sub-contractors and third-party suppliers** • **Provide potable water for site workers** • **Prohibitive, warning and directional signs will be provided on site.** • **All workers will undergo medical screening before they are employed on site** • **Trenches will be covered immediately they are not required;** • **Water collected in trenches will be pumped out daily after work;** • **Cement will be debagged in an enclosed area by workers wearing nose masks, overall and boots;** • **Mobile toilets for males and females and refuse bins shall be provided on site for site workers** • **Only healthy workers will be employed on site.** • **Potable water shall be provided for site workers;** • **First Aid Kits shall be provided on site and made accessible to site workers to**

	deformity, long term or permanent injury.	**use in case of emergency;** • **Personal Protective Equipment (PPE), namely, hard hats, reflector jackets, overalls and boots will be provided for all workers on site and others such as nose masks, hand gloves and ear plugs will be provided for workers whose tasks require these PPEs;** • **The use of PPEs will be enforced by the Contractor** • **Clear sanctions and rewards for non-compliance and compliance respectively shall be captured in the Code of Conduct and shall be signed by the contractor (s), sub-contractors and their employees;** • **A Health and Safety Officer shall be employed to oversee the environment, social, health and safety aspects of all workers, hold daily briefing sessions (tool box meetings) with site workers prior to commence of work and enforce a "No PPE–No site entry policy";** • **organising daily tool box meetings before the commencement of the day's work** • **Saw dust and other spill containment materials shall be provided on site** • **Training programme in occupational health and safety as well as emergency response e.g., spill containment shall be conducted for employees of the contractors** • **All fuels/lubricants, equipment will be parked on impervious surface which is well ventilated**
Potential Rise in Illicit Sexual Affairs	**Site workers, with relatively higher incomes, will be working within the villages/towns. This has the potential to increase illicit sexual affairs notably prostitution as an underground economy. Associated with the**	• **The Contractors' and Sub-Contractors employees will be sensitized on the dangers associated with illicit sexual affairs during the project duration e.g. risk of catching STDs, Hepatitis-B and criminality** • **HIV/AIDS/STI and Hepatitis-B Awareness Campaigns shall be provided for employees of the contractor prior to project commencement** • **Condoms will be distributed among Contractors and Sub-Contractors employees every month**

	illicit sexual relationships is the rise in sexually transmitted diseases such as HIV/AIDS.	• **Poster and signage on HIV/AIDS, STI and Hepatitis-B will be posted on and within the project environs** • **A Code of Conduct will be prepared, explained and signed by employees of Contractors and Sub Contractors on each Sub Project to inform them about the sanctions for illicit sexual affairs**
Labor Influx	**The Contractors will be hiring and mobilizing various categories of Labor; skilled, semi-skilled and unskilled Labor to supervise or undertake the works under Component 1, 2 and 3. If proper background checks are not undertaken, under aged persons and persons with questionable characters, who lack the qualification and experience to undertake such assignments will be employed and deployed into the beneficiary communities during the construction phase. Poor recruitment policy and lack of training in community may also lay the foundation for conflicts between beneficiary communities and employees of the contractors and sub-**	• **Labor Management Plans shall be prepared by Project Contractor(s) based on the Project Labor Management Procedures for approval by the Bank/PMU to guide labor relations** • **Local Labor will be given preference in hiring of workforce** • **Stakeholder Engagement Plan (SEP) - systematic liaison with community representatives.** • **Contractors and Sub-contractors will be required to hire Labor through a structured HR process and not 'at the gate'** • **All workers will be given contracts specifying the type of work they are to undertake and their remuneration package as well as their conditions of service in line with Sierra Leone Labor laws** • **Contractors shall be required to consider alternative work schedules or shifts to accommodate the hiring of more female workers.** • **Certain employment opportunities on site shall be preserved for vulnerable persons such as Persons Living with Disability and women e.g. wardens** • **A grievance mechanism system will be made available to all workers to report any issues associated with OHS and /or labor and working conditions**

	contractors **Employers may attempt to subvert national Labor laws by paying wages below the national minimum wage, employing workers without contracts and allowing workers to work over time without paying them the commensurate wages among others**	
Incidence of Child Labor	**As the project will be implemented as an emergency response program, there is the tendency for Project Contractors and Sub-Contractors as well as the selected Contractors to engage children 18 years and below exposing them to hazards associated with civil works**	• **A Labor Management Plan shall be prepared by the Project Contractor(s) based on the Project Labor Management Procedures for approval by the Bank and RIAC project team** • **Children and minors will not be employed directly or indirectly on the project. Birth Certificates of potential employees will be checked and in the absence of a birth certificate a responsible persons'/opinion leader in the applicant's community e.g. Imams, Civil Servants guarantee their application forms that they are above 18 years**
Incidence of Gender Based Violence/asexual Exploitation Abuse and Harassment	**Direct project workers and employees of Project Contractors and sub-contractors may be involved in sexual harassment and rape as well as defilement. Other forms of gender-based violence and**	• **Contractual Clauses on mandatory and regular training for workers on required lawful conduct and legal consequences for failure to comply with laws on non-discrimination and GBV will be inserted in Contract Documents;** • **Contractual Clauses with a commitment to cooperate with law enforcement agencies investigating cases of gender-based violence shall be inserted into the Contract documents of the contractor and Supervising Consultant** • **The Contractor shall be required to consider alternative work schedules or**

	discriminatory practices that may occur during project implementation include employers and supervisors requesting for sexual favors as a pre-requisite for employment opportunities at the workplace. Workers may also be engaged in issuing threats, insults, assault and other forms of abuse on girls, women, children and other vulnerable groups. Acts of Gender Base Violence have long term physical health and psychological effects on survivors	**shifts to accommodate the hiring of more female workers.** • **Contractual clauses against rape, defilement and other Gender based Violence as well as child and forced Labor shall be inserted into the contract of the Contractor and Supervising Consultant** • **Workers on site will sign Code of Conduct with sanctions on rape defilement, abuse and other gender-based violence** • **Sensitization workshops shall be undertaken for employees of the Contractor/Supervising Consultant and Sub-Contractors as well as persons working or living in the immediate project environs** • **The Contractor shall provide contact numbers of the nearest law enforcement Agency Office, the Grievance Redress Committee Members and GBV Service Providers to offices, schools and clinics within the project zone** • **Prohibition posters on sexual exploitation and harassment will be posted in and around the site.**
Increase in the incidence of Water and Sanitary Related Diseases	**Poor housekeeping at the camp sites and lack of toilet facilities for site workers involved in the rehabilitation of irrigation schemes and the establishment of small-scale storage and primary processing facilities will lead to littering and open defecation on the various project sites, which will expose the site workers and residents of**	• **Using unhazardous excavated soils as fill materials during back filling of the trenches and filling gullies and potholes in the communities with same** • **Provision of refuse bins to collect refuse within the work zones and camp sites** • **Refuse bins will be emptied daily and sent to approved Final Disposal Sites** • **Provide a canteen and toilet facilities for gangs on site** • **Contractors will be made to keep their offices and workers camps neat**

	catchment communities to sanitary related diseases such as cholera	
Excessive water losses	**Poorly designed and constructed systems with inappropriate materials and installations to regulate water flow can increase seepage and evaporation of water in the leading to excessive water losses which reduces the amount of water reaching the fields. While selecting the material/design energy and water efficiency should be considered**	• **Design of and supervision of irrigation scheme will be undertaken by qualified engineers and other professionals** • **Designs will be vetted and approved by RIAC and Africa Development Bank** • **Construction materials will be approved by RIAC project team** • **As much as possible drainages will be lined with concrete, in some case PVC pipes will considered** • **In case earthen river or stems are to be constructed, they will be lined with clay material to minimise seepage** • **Gates and other installations that regulate the flow within the irrigation system will be installed as part of the sub projects'**
Energy use	**Concrete mixers, excavators and other machines and vehicles will be used during the construction phase of the project. Contractor offices and camps will also use energy to power air conditioners**	• **Equipment and vehicles will be turned off when not in use**
Air pollution	**Land preparation and the construction of gabions involving cut and fill will create loose particles, which under the influence of wind will increase**	• **Contractors will be made to adhere to manufacturer's servicing and routine maintenance schedules for all construction equipment or maintenance will be undertaken once a month, whichever is more stringent** • **Carrying out trenching in such a way that are lined immediately after trenching** • **Limiting speed on access roads/haulage routes to less than 20km/h**

	dust levels at various irrigation site **Clearing and stock piling sand for the construction of drains, processing and storage centers etc. will also create a similar effect.** **Construction equipment and haulage trucks will emit SO_X, NOx and CO_2 and create dusty conditions contributing to their concentration in the atmosphere, hence reducing ambient air quality**	• **Water exposed surfaces at least twice a day, when necessary** • **Equipment and vehicles will be turned off when not in use** • **Haulage trucks will be covered with tarpaulin** • **Materials will be stockpiled in bonds and covered with tarpaulin**
Increase in noise levels	**The likely sources of noise during the constructional phase will be movement and operation of machines, trucks and equipment during the rehabilitation of the irrigation systems and construction of the small-scale storage and primary processing centers. The noise may affect communities within and close to the selected irrigation schemes and sites for the construction of the primary**	✓ **In the event that excessive noise generating activities have to be undertaken within the project environs that will adversely impact catchment communities, they will have to be notified at least 24 hours ahead of the commencement of such activities;** ✓ **All equipment will be serviced at least once a month or according to the manufacturer's specifications** ✓ **Equipment and vehicles will be turned off when not in use** ✓ **Concrete mixers will be fitted with mufflers to minimize noise;** ✓ **Haulage and delivery trucks as well as other construction vehicles/equipment will be made to drive at a speed less than 20km/h and with covered with tarpaulin.**

	processing and small-scale storage facilities.	
Impact on material sources	**Sand and aggregates will be required during the construction and other drainage structures as part of the irrigation schemes as well as fill operations to level the fields. Sand, wood and gravel will also be essential material for the construction of small-scale storage and primary processing centers. Sand will be required to filling to improve slopes and other soil conservation measures**	• **Contractors will ensure that all permits and clearances are obtained from the relevant authorities for burrow pits, quarries etc. prior to the operation of borrow pits** • **Safety nets will be used to barricade the perimeter of all burrow pits and other material sources** • **Appropriate warning signs will be placed at vantage points to warn the local population about the presence of burrow pits.** • **All burrow pits and material sources will be re-stated to the satisfaction of the Project Engineer and EPA** • **Natural vegetation species will be allowed to re-establish in the area of the burrow pits**
Loss of Vegetation	**There will clearing as part of extending drainage networks and also land preparation during the rehabilitation/extension of the**	• **Civil works and soil conservation activities will limit vegetation clearance to areas demarcated for such works.** • **Vegetation clearance for the rehabilitation works will be limited to weeds in the existing areas** • **Construction works will carry out vegetation clearance in sections and will be**

	irrigation systems as well as part of the establishment of small-scale storage and primary processing facilities. Terracing, construction and other soil conservation activities envisaged under the Project may also involve clearing of vegetation. These activities will lead to loss of vegetation including trees.	**limited to portions** • **Stands of trees will be left at the boundaries of the farm to serve as windbreaks.** • **Careful design and location of works including routing to avoid sensitive vegetation;** • **Removal of vegetation and trees shall be strictly within the clearly defined boundaries;** • **Re-vegetation of exposed soils with indigenous plant species shall be undertaken immediately after backfilling** • **Damaged trees shall be replaced four-fold** • **Seasonal work methods shall be applied where necessary**
Soil Erosion and Sedimentation of Waterbodies	**Clearing, digging, trenching, cutting and filling during land preparation, rehabilitation of irrigation systems, the construction soil conservation and rain harvesting infrastructure, and the establishment of processing and storage centres will expose the top soil to gully and sheet erosion under the influence of wind and other agents of erosion. The eroded soil can be deposited into to nearby water bodies to cause sedimentation.**	• **To the extent possible vegetation clearing shall be undertaken in phases so that entire sub project areas are not cleared at once** • **All top soil to be stored in temporary stockpiles to minimize any damage or loss of function and used whenever possible as fill material.**
Water Pollution	**Oil, fuel and lubricants from**	• **Contractor(s) shall not cleanse or repair their equipment and vehicles within**

	construction vehicles/equipment that will be cleansed will pollute water bodies within or close to sites where physical works will be undertaken. This will adversely affect life in these water bodies and downstream users and quality of the water. Other source of water pollution are material spills and dumping of liquid and solid waste into water bodies by site workers	**200 metres of any waterbody** • **Install oil/grease traps or inceptors on drains from material storage areas and work zones where activities that can cause potential oil spillage will be occurring** • **Proper sanitary facilities will be constructed at construction camps/ site offices and preventing contamination of water bodies** • **Liquid waste from construction camps and site offices will be channelled into septic tanks and dislodge at approved final disposal sites**

Material Spills and Drips	**Accidents involving haulage trucks carrying fuel and other construction materials or waste from the construction zones can cause spills which will disrupt traffic and human movement, destroy road infrastructure as well as pollute ground and surface water resources.** **Spills may also occur during loading and off-loading at various sub project sites as well as during repair and routine maintenance of construction equipment and vehicles, when fuel and oil drip/spill from engines and other machine parts on to the ground. Spills can degrade the soil and contaminate ground and surface water resources within the project zone.**	• **Fuel shall be in tanks installed in a bonded area and shall be replaced in case of leakage;** • **Workers shall be trained on the correct transfer and handling of fuels and oil;** • **Ensure all vehicles are in proper working condition to ensure there is no potential for leakage of oil, hydraulic fluid and other hazardous materials.** • **All hazardous substances and materials will be stored at least 500 metres from the nearest water body** • **Place drip pans under equipment and vehicles during servicing and routine maintenance to collect waste oils/fuel and lubricant for re-use or sell to other entities, e.g. machine operators** • **Portable spill containment and clean-up equipment shall be provided at appropriate locations on site and training will provided in the use of same** • **Install oil/grease traps or inceptors on drains from material storage areas and work zones where activities that can cause potential oil spillage will be occurring** • **Develop a procedure for managing the discovery of contamination such as daily inspection of oil/fuel and lubricant storage areas and equipment;** • **Where there is evidence of spillage and leakage assess the activities carried out on site and review the operational procedures in place. Modify these, where appropriate**

Generation of Construction waste	**Excavated materials, debris wood and concrete residue are some of the construction waste that will generated during the land preparation, rehabilitation and related activities as well as the construction of scale of the small-scale storage and processing centres and the implementation soil conservation such as construction of trenches. Servicing and maintenance of machinery and equipment and installation works may generate waste such as scrap metal, empty lubricant containers, rubber seals etc. Poor disposal may cause ponding, soil containment and accidents**	• **Wood residue, sand/excavated materials, cement blocks and other waste will be used as fill material where possible** • **Waste that cannot be reused will be transported to the approved landfill sites;** • **Empty paint and solvent containers will be collected and kept in well-ventilated store rooms with paved floors and returned to suppliers to be re-used** • **Usable scrap will sold to local dealers**
Accidents involving residents of Catchment Communities	**Farmers, residents of catchment communities and visitors to various sub projects sites can slip and fall into trenches and pits dug for as part of drain extension, building foundations, sceptic tanks and other**	• **Warning, mandatory, prohibitive and directional signs shall be provided along the project routes and other working zones to guide site workers and visitors who will access the project zone during the construction phase** • **In addition to the formal vehicle registration numbers, all construction vehicles, haulage trucks and equipment shall be clearly embossed with two-digit identification numbers in front, at the back and sides for easy identification** • **Contractor(s) shall emboss the company's phone contact boldly on all vehicles**

	construction purposes. Such persons may also be at risk of getting injured or dying through cuts, hits and burns arising out of negligence by site workers, poor housekeeping on site. **Cattle and other livestock belonging to residents of catchment communities may fall into open pits and trenches dug as part of the extension, drains and building foundations etc. The same situation can also happen of soil conversation and rain harvesting infrastructure under construction** **Haulage trucks and construction vehicles could also be involved in accidents leading to injuries, fatalities and/or loss of property of residents of catchment communities including livestock.**	**and equipment** • **Systems will be put in place for accident reporting, emergency preparedness and protocols for dealing with accidents** • **A GRM will be set up as part of the project implementation architecture to receive, investigate and resolve grievances and provide information to the general public** • **Contacts of members of the Grievance Redress Committee will be pasted at vantage points in the communities and health facilities and announced on radio in the local languages** • **Designated crossings will be provided for human beings and livestock within the network** • **The catchment communities will be sensitized on the dangers associated with civil works and advised to not go near the construction sites without authorization.**
Community exposure to HIV/ AIDs, Hepatitis-B and COVID 19	**Site workers can also pick-up infections and spread it among the general population**	• **Communities in which sub projects will be undertaken will be sensitized on the COVID 19, HIV/AIDs, Hepatitis-B symptoms and preventive measures and against stigmatization of persons and other infectious diseases using the mass media**

Land take and Involuntary Resettlement	**The rehabilitation of the irrigation systems including the extension of the land and land preparation has the potential to restrict access to existing farms temporarily and/or destroying existing farms.** **The land extension, the establishment of storage and processing facilities will lead to land take with the possibility of causing temporary and permanent loss of livelihood, damage to assets as well as loss of livelihood.**	• **All Project Affected Persons who will be temporarily or permanently displaced or will lose their assets and/or livelihoods as a result of the proposed project shall compensated in line with the requirements of ISS3 and the laws prior to the commencement of works** • **A Resettlement Action Plan shall be prepared in line with the requirement of ISS3 and Sierra Leone laws, within the framework of the RFP to guide the resettlement process in the event that any sub project that occasions involuntary resettlement** • **Provision of temporary wooden accesses across to facilitate pedestrian movement across the trenches.**
Chance finds	**During trenching and digging as part of implementing soil conservation measures, rehabilitating and expanding irrigation schemes and the establishment of small-scale storage and primary processing centers objects of archeological, historical and cultural significance may found**	• **A Chance Find Procedure has been Annexed to this report** • **Site workers will be sensitized based on the Chance Find Procedure**
Potential impacts on Culturally	**Culturally sensitive sites such as sacred groves, places of worship**	• **All known culturally sensitive sites or assets will be identified and mapped during the preparation ES instruments**

Sensitive Sites and Assets within or close to the fields and other sites for Sub Projects	**and cemeteries which may be within or close to fields and other sub project sites may be adversely impacted or abused as a result of implementing the sub project**	• **Where possible, the civil works will avoid culturally sensitive sites/assets** • **Culturally sensitive sites in the project area (including communities) which can be avoided shall be preserved and incorporated in the project design and suitable buffers will be provided around such areas and assets** • **Contractors and Sub Contractors shall ensure the construction workers are sensitized about the significance of culturally sensitive sites/assets and instructed to accord the necessary respect to these areas when working close to them.** • **In situations where avoidance is not possible, communities, tribal and religious leaders as well as owners, managers, experts and the relevant Government Institutions will be consulted prior to entering culturally sensitive areas as well as on acceptable modes of dealing with the specific culturally sensitive areas, issues and/or asset e.g. preserving, rehabilitating, moving, excavating etc.** • **Where appropriate, a Cultural Heritage Management Plan will be prepared outlining the anticipated impacts of the project activities on the cultural resources/assets, processes and outcomes of stakeholder consultation and remedial measures based on the mitigation hierarchy**
Conflicts between site workers and residents of catchment communities	**Conflict may result from a lack of knowledge of local customs and cultural etiquette on the part of employees of the Sub Project Contractors and Sub Contractors.** **Misunderstanding and miscommunication of project objectives and components can also spark conflicts during the**	• **A GRM will be set up as part of the project implementation architecture to receive, investigate and resolve grievances and provide information to the general public** • **Project relevant information will be disclosed to stakeholders using local media and community focal persons, workshops etc.**

	construction phase of the Project.	

Table 7: Potential Adverse Environmental and Social Impacts/Risks-Operational Phase

Impact/ Risk	Impact/Risk Description	Mitigation Measures
Accidents involving Farmers as well as Employees at the rice Mills. Seed Producing Entities, Storage and Processing Centres	**Farmers may get cuts, bites and stings during farm work** **Workers at the Mills, Seed Producing Entities and Processing and Storage Centers may injure themselves as a result of cuts, slips and long hours of exposure to heat, noise and dust. These accidents and health risks can be fatal**	• **RIAC project will provide all farmers with PPEs including boots, gloves, nose masks and googles** • **Each farmer will be provided with a First Aid Box** • **Demonstration on the correct use of PPEs will be undertaken for the participating farmers** • **Irrigation engineer will nominate a senior member to enforce the use of PPEs on the fields** • **An Agreement will be signed RIAC between and the selected communities, the Mills and Production Entities specifying the following:** - **Provide all factory workers with appropriate PPEs for their line of work e.g. gloves, head covers, masks, overalls, uniforms and slippers/boots**

		- **Provide Occupational Health and Safety (OHS) Training for Employees at the Seed Production Companies and Mills workers twice a year** - **Assign occupational, health and safety enforcement responsibilities to a management staff** - **Provide First Aid Boxes and Fire Extinguishers at the premises** - **Arrange with a healthcare provider for referral emergency cases** - **Report all major accidents/incidents at involving equipment, vehicles and employees within 24 hours and minors' ones in their monthly reports**
Labour Relations (Child Labour Discrimination etc.)	**Owners/Managers of the selected Mills and Seed Production Companies may attempt to subvert national labor laws by paying wages below the national minimum wage, employing workers without contracts and allowing workers to work over time without paying them the commensurate wages, suppress freedom of association and discriminate against vulnerable employees among others**	• **An Agreement will be sign between RIAC and the project staff, Mills and Production Entities specifying the following:** - **All workers will be given contracts specifying the type of work they are to undertake and their remuneration package as well as their conditions of service in line with the national labour laws of Sierra Leone** - **All contracts with employees of selected Seed Production Companies and Mills will be reviewed by the Ministry of Labour and signed by workers** - **Employers shall be required to consider alternative work schedules or shifts to accommodate the hiring of more female workers** - **A Code of Conduct will be prepared, explain to the workers in the local languages and then signed by the workers** - **Zero tolerance for child and forced labour as well as discriminatory practice** - **Institutionalization of a transparent and accessible work-based grievance redress mechanism that does not target and intimated aggrieved parties** - **The Agreement shall contain sanctions breaching the above-mentioned provisions**
Incidence of GBV among farmers and	**Female farmers and workers at the selected mill, storage and**	• **Sensitization program on GBV shall be undertaken for all workers at the Mills and Seed Production Companies as well as farmers,**

workers at the Mills	**processing centers may become victims of GBV in the discharge of their duties or their superior may elicit sexual favors before recommending them for land allocation, training program and other benefits under the Project**	• **Contact numbers of the nearest GBV Service Provide.** • **sexual exploitation and harassment will be pasted within the premises of all Mill and Irrigation Officers as well as storage and processing centers and in various communities where sub projects will be implemented.** • **A helpline will be provided and disseminated in all the selected communities by RIAC team to deal with GBV complaints. The hot/helpline will be announced through media (radio, television etc.) in all local languages as well as transmitted to phone numbers through text messages** • **Background checks on all staff including security personnel to be employed at the Mill and Seed Companies etc. will be undertaken** • **Media and electronic platforms will be used to encourage citizens to report any abuse of the system including GBV** • **A designated senior members of Irrigation engineers and management staff of the selected Seed Production Companies will be placed in charge of receiving, sorting GBV issues and providing back to aggrieved parties;**
Excessive Water Losses	**Weeds in the swamp areas resulting from poor maintenance of the irrigation systems will absorb water meant for the fields, while cracks in the site due to same will lead to seepage. This will reduce the amount of water reaching the fields**	• **Daily inspection for weeds and other defects** • **Routine maintenance including clearing of weeds and sealing leakages and seepage will be undertaken based on a schedule** • **The schedule of water supply to the field will be planned together with the farmers** • **Farmers and Irrigation workers will be trained in water conservation techniques** • **RIAC and Irrigation workers will ensure routine maintenance works such as clearing of weeds and sealing cracks in the fields are undertaken based on a greed schedule**
Excess Abstraction	**Faulty gates and other installation, unplanned**	• **A water demand analyses will be undertaken prior to the selection of the sites to be expanded or rehabilitated**

	abstraction and lack water of demand analyses may lead to over supply of water to the fields depleting the water sources and adversely affecting rice growth and yields	• **Irrigation workers will be required to follow the planned supply schedules** • **Crop water requirements will be matched to water supply on the fields** • **The abstraction points will be monitored daily for water level and yields respectively** • **Emergency shutdown levels for the various sources will determined for each source and communicated to all stakeholders.** • **Routine maintenance of all the irrigations will be planned and followed strictly**
Reduction in Indoor Air Quality at the Mill site	• **Emission from the mill together with dust is likely to reduce indoor air quality within the factory**	• **Participating private sector mill will be well ventilated** • **Regular servicing of equipment at the Mill (factories) to be under to meet manufacturers specifications** • **Factory will be shut down daily after operations are completed**
Increase noise levels	• **Mill (Factories) will generate excessive noise when they in operation**	• **The participating Mill will be serviced twice a year or in accordance with the manufacturer's specification**
Decline in soil fertility	**Excessive and unsupervised use of agro-chemicals and mono cropping can increase soil salinity and acidification which will ultimately lead to loss of soil fertility**	• **An Integrated Pest Management Plan for various sub projects involving farming activities/irrigation will be prepared and implemented** • **Handling and application of fertiliser, pesticides and other agro-chemicals will be undertaken under the supervision of extension officers** • **Training farmers in the application of pesticides and other agro-chemicals will be undertaken** • **Soil sampling at specific intervals** • **Application of soil ameliorates such as lime to reduce** • **Water flow will be regulated through the appropriate use of gates and related infrastructure to prevent waterlogging** • **The agreed schedule of water supply by the Irrigation officer will be followed in each scheme** • **Introduction of crop rotation and other good agronomical practises will be**

		undertaken to sustain soil fertility
Incidence of water logging	**Poor design and implementation of land preparation may lead to poor slopes, hence the inability to drain the fields. This will lead inundation of the plots, which can reduce yields for rice and the other selected crops**	• **Leaching (draining) the irrigated fields at specified intervals** • **Gates will be installed on the fields to regulate the flow of water in the fields**
Exposure of Farmers to Hazardous Chemicals	**Farmers will use fertiliser and other agro-chemicals such as pesticides in the cultivation and other selected crops. They will be exposed to these adverse health effects of these hazardous chemicals.**	• **Irrigation staffs will ensure that any pesticides used are manufactured, formulated, packaged, labelled, handled, stored, applied, disposed of, and applied according to the FAO's International Code of Conduct on Pesticide Management** • **Farmers will be trained on appropriate use, handling and disposal of agrochemicals.** • **Empty pesticide containers will be triple rinse, kept in separate colour coded bins and return to suppliers** • **PPEs such as nose masks, googles will be provided to all farmers under the Project** • **Irrigation staffs will nominate a designated person to enforce the use of appropriate PPEs such as gloves, nose masks, coveralls, goggles, safety boots, etc. especially during the handling and application of agrochemicals** • **Nose masks and overalls will be provided to farmers during winnowing and threshing.**

Water pollution from Irrigation Fields and Mill	**Excessive pesticides and other agro-chemicals may be used on the farms, if supervision is poor. The chemical residues can be washed or drained into nearby water bodies posing a threat to aquatic life, livestock and users downstream.**	• **Training of farmers in the use of pesticides and agro-chemicals will be undertaken** • **Waste water/process water from the fields and mill will not be discharged directly into water bodies** • **Buffers will be created around water bodies within or close to the agriculture fields**
Accidents involving residents of catchment communities	**Residents of catchment communities and livestock may accidentally fall in drainages or may hit by delivery vehicles leading to injuries and fatalities**	• **Designated crossings will be provided for human beings and livestock within the network** • **Directional signs will be placed in the fields to guide farmers and the general public to designated crossing points** • **Delivery/haulage trucks will be made to drive at speed of less than 20 km/ph** • **In addition to the formal vehicle registration numbers, all construction vehicles, haulage trucks and equipment shall be clearly embossed with two-digit identification numbers in front, at the back and sides for easy identification** • **Haulage truck containing supplies shall emboss the company's phone contact boldly on all vehicles and equipment** • **Systems will be put in place for accident reporting, emergency preparedness and protocols for dealing with accidents** • **A GRM will be set up as part of the project implementation architecture to receive, investigate and resolve grievances and provide information to the general public**
Incidence of water and sanitary related diseases	**Farmers and residents of catchment communities drink or use from the streams without**	• **Sensitization of catchment communities on the dangers of drinking water in the streams and drains will be undertaken**

	any form of treatment exposing to water related diseases such as cholera. **Poor waste management and lack of toilet facilities within the fields, processing and storage centers and well as the selected Mill area can lead to littering and open defecation respectively, which can also cause the outbreak of water and sanitary related diseases**	• **Warning signs will be placed along the stream area indicating to the residents of the catchment communities and farmers not to drink or use raw water from the streams for domestic purposes** • **Refuse bins will be placed at vantage points within the fields, storage and processing facilities for waste collection** • **Refuse bins will be emptied daily.** • **Toilet facilities with hand washing facilities will be provided in all the storage and processing facilities to be established and same will be situated in vantage points within the fields** • **Open defecation will be discouraged through education of the farmers and workers.**
Emergencies	**Fire outbreaks, floods and pest attack may occur on the fields under irrigation destroy crops (rice)** **The selected mill, processing and storage facilities can experience flooding and outbreaks to due to sub standards or faulty electrical cables and fittings, overloaded circuits or negligence on the part of employees. Other disasters that can occur in these places are flood and spillage of goods in transit and stocks in the storage**	• **Good Agroforestry practices such as windbreaks, boundary planting of trees, riparian buffers will be practiced on the farms** • **Farmers and workers at the selected Mill, demonstrating farms, Processing and Storage centers will be given training in emergency response procedures such as firefighting and sensitized on the activities that are likely to cause fires.** • **Prepare Emergency Response Plans for the various fields, Processing and Storage Centers covering fire, spillage, flood and accidents of goods in transit will be prepared and implemented.** • **processing and Storage centers will be insured against fire, spills, flood etc.** • **Contacts (phone) of the nearest Agricultural Station, Police and Fire stations will be placed at vantage points, processing and storage centers as well as within the farms.**

	centers	
Conflicts Among Water Users and Farmers	**Due to the competitive use of water, there is a potential for conflict between the population downstream intake point and the farmers/Irrigation workers especially if there are shortages post the extension/ rehabilitation of the irrigation scheme. Conflicts may also erupt among farmers or between farmers and the land allocation committee during land allocation**	• **Irrigation staffs and Watershed Management Committees will be formed and provided the platform to meet and deliberate on catchment related issues as part of this project** • **Watershed Management Plans that will guide the water use and other activities/intervention within the selected catchments will be prepared and implemented under this project.** • **Land will be allocated by the Irrigation workers based on guidelines by RIAC management** • **A GRM will be set up as part of the project implementation architecture to receive, investigate and resolve grievances and provide information to the farmers and general public** • **Contacts of members of the Sub Project Grievance Redress Committee will be pasted at vantage points in the sub project communities and announced on radio in local languages**
level of potential site-specific disputes over water uses and also seed distribution among the farmers (between beneficiary and non-beneficiary farmers);	**potential site-specific disputes over water use and seed distribution among the farmers (between beneficiary and non-beneficiary farmers)**	**A- The nature of the interventions will not involve additional water abstraction but will ensure proper transmission and distribution by rehabilitation / replacement and minor additions to the ongoing schemes. Therefore, given the nature of works envisaged under the proposed project: (a) the project will not adversely affect the quality or quantity of water flows to other riparian; and (b) it will not be adversely affected by other riparian's water use.** **B- To follow the basic criteria for seed distribution, which is approved by ADB.** **In case of raised grievance, it will be mitigated through well-established grievance redress mechanism.**

Risks or impacts associated with land and natural resources tenure and use		• **The project activities could involve minor land acquisition impacts. The construction and rehabilitation works will take place on government-owned land; however, due to the nature of the project activities, the proposed interventions may cause minor land will be acquired, for any of the infrastructure, based on the principles of the Resettlement Framework (RF) and after site specific Resettlement Action Plans (RAPs) to be prepared and disclosed.** • **The affected people shall be compensated for their lands as per the RF, where and as applicable.** **In cases of land donation, the project will ensure that:** • **No land donation is done under pressure;** • **Donated land is not more than 10% of total asset of the donor; and** • **The donor legally transfers the land for the sub-project work.**
The risks of social exclusion, corruption and nepotism resulting in decreased trust in local and national government and social conflicts among vulnerable, elite groups and local authorities.	**The project activities can lead to social exclusion, corruption and nepotism resulting in decreased trust in local and national government and social conflicts among vulnerable, elite groups and local authorities.**	**The fight against corruption requires sustained commitment on the part of the Government, public, civil society, and international community. The Government has made notable progress through: high-level leadership signaling a shift away from the culture of corruption;** **The project considers the proactive concept and consider bellow tasks:** • **establishment of project-level anti-corruption committee;** • **efforts to professionalize the merit-based recruitment,** • **transparent and effective admin/financial management, including in procurement;** • **seed distribution to be based on the approved criteria.**
Incidence of pest attack and diseases	**Poor selection and treatment of seeds can transmit diseases.**	**Disease resistant varieties of the selected crops suitable for the local soil and climatic conditions.**

on the Fields	**Pests such as rodents may attack the farms. Disease associated rice production include rust (fungus).**	• **Seed companies selected to be part of the project will be trained to upscale their skills/technics in seed production including proper selection of parent material, cleaning of seeds and treating seeds with fungicides/insecticides to prevent disease transmission** • **Farmers will be trained to identify the early warning signs and symptoms of diseases and pest attack**
Pest infestation and contamination of stored grains	**Stored grains are susceptible to attacks from insects and rodents such as weevil and rats, if the necessary management practices and storage conditions are not followed. In addition to feeding on stored grains to reduce their quality, rodents may also contaminate stored grains through their droppings, urine and hair. These animals may spread diseases to human who consume it.**	• **Design of storage and processing facilities will have adequate ventilation** • **The Project will adopt an integrated insect and rodent management system to control insects and rodent infestation. This will include:** - **Good housekeeping practices such as regular cleaning inside warehouses/storage and primary centers and proper packing of produce for ease of inspection;** - **Keeping the surroundings of storage and primary processing centers clean and free from weeds;** - **Preventing insects and rodents from entering storage and primary processing centers by regularly inspecting all doors, walls, windows and roof for any openings and repairing them;** - **Use of biological control, such as cats, to keep mice and other rodents from the storage and primary processing centers** • **Rodent traps will be used at the various storage and processing centers as well as the Mill to suppress rodents** • **Chemical control/fumigation through the use of EPA approved agrochemicals to control pests and rodents.**

Table 8: Potential Adverse Environmental and Social Impacts/Risks-Decommissioning

Potential Adverse Impacts/Risks	Impact/Risk Description	Migration Measures
General Decommission	**Failure to dismantle or assign use for site offices, sheds, equipment and material residue after the execution of works can also lead to accidents**	• **Utility supply to all temporary structures, e.g., workshops and sheds would be disconnected;** • **All temporary structures erected by Contractors will be dismantled;** • **Dismantled parts including wood pieces and sand rete blocks will be arranged according to type and prepared for transportation to Contractors workshops or sold to dealers for other civil works;** • **Unwanted wood residue and other waste will be hauled to the approved final disposal site.** • **All equipment and machinery that are usable will be moved to a new project site or sent to the Contractors packing yard.** • **Non-usable equipment and metals will be sold as scrap to the scrap dealers**

6.0 Procedures to Address Environment and Social Issues

6.1 Introduction

A number of activities will be undertaken to ensure that the environmental and social impacts/risks of sub projects under Sub-Component 1.1, 1.2 ,1.3, 2.1, 2.2, 2.3, 3.1 and 3.2, are duly identified, assessed and managed; and reporting requirements of ADB with national laws are complied with. These are discussed in the following sub sections. It must be noted that an Environmental and Social Commitment Plan (ESCP) containing high level commitment from the Government of Sierra Leone to mitigate environmental and social impacts/risks associated with this RIAC project will be prepared and disclosed.

6.2 Environmental and Social Due Diligence of Seed Production Entities (Farms) and Mill

An Independent Consultant will undertake environmental and social due diligence of the seed farms and mill and propose actions to ensure compliance with Sierra Leone environmental, social protection and Labor laws as well as the requirements of the Bank, as prescribed in this report, where gaps and non-compliance are observed.

6.3 Project Screening

All sub projects under Sub-Components 1.1, 1.2 ,1.3, 2.1, 2.2, 2.3, 3.1 and 3.2 with environmental and social risks in the under listed categories will undergo screening:

vii. **Physical/civil works;**
viii. **those that have the potential to expose workers and community members,**
ix. **those that have elements of procurement, transportation, storage, handling, use and disposal of chemical/agro-chemicals;**
x. **recruitment of employees**
xi. **those that will involve land acquisition or any form of displacement including physical or economic;**
xii. **those that have the potential to expose health workers and/or the general and other health risks.**

Initial screening of sub projects for environmental and social impacts/risks shall be undertaken by Environment Social and Gender Officers at Regional Office (regional Level PMU) using an environmental and social screening form. This will involve visiting the selected interventions areas and their immediate environs to observe and recording environmental and social baseline conditions, undertake initial consultations with stakeholders and identify anticipated project impacts/risks and broad mitigation measures together with providing other relevant information on the subproject to facilitate project categorization by the Bank.

The outcome of the screening exercise will determine the type of E&S instrument that will be prepared and we do not expect if there will be any high-risk project. If the

screening process concludes that a subproject is likely to have significant and/or irreversible negative environmental and/or social impacts/risks such subproject will not be accepted and thus no ESIA will be needed. Meanwhile, sub-projects with high E&S risks will not be eligible under the project. On the other hand, if the screening process concludes that a sub project is likely to generate impacts/risks that are moderately significant, largely reversible and limited to the site and its immediate environs, then a sub project/site specific Environmental and Social Management Plan (ESMP) shall be prepared to cover the sub project prior to initiating the sub project.

Minor works and procurements with low to insignificant environmental and/or social impacts/risks will go through only screening. For sub projects that will lead to permanent or temporary loss/damage of assets, economic losses or physical displacement, an abbreviated resettlement action plan or resettlement action plan will be prepared in line with the requirements of Sierra Leone laws depending on the magnitude of the resettlement impacts.

The PMU will submit the screening reports, ESMPs, and RAP to the Bank

for review and sub project categorization. The documents including Screening checklists ESMPs and code of conduct should be part of subproject contract, as part of the contractual obligation, the contractors should implement the ESMPs and other plans Copies of the ISS documents will be kept at the PMU. The screening criteria is presented in the table below

Table 9: Screening Categories/Criteria

Classification	Sub-projects Requiring Full ESIA	Category B Subprojects ESMP Required	Smaller Subprojects
EPA	**Sub projects requiring new construction land acquisition and/or with structures with a height of 10m or above, Category 1**	**Subprojects involving rehabilitation of existing structures; potentially causing low to moderate level of negative but reversible and localized impacts**	**All other subprojects – environmental screening is required**
Bank	**Complex large scale sub projects at high value sites with long-term/permanent irreversible and significant adverse environmental and social impacts/risks (Mostly high-risk projects, though some substantial risk project may also require the preparation of ESIA)**	**Less complex medium scale sub projects at less sensitive sites with predictable less adverse environmental and social impacts/risks that are predictable, reversible and can be reliably mitigated (Substantial and Moderate risk sub projects may require the preparation of ESMPs)**	**Low Risk sub projects with minimal, negligible or no environmental and social impacts/risks (Low risk projects)**

7.0 SCREENING OF ENVIRONMENTAL AND SOCIAL IMPACTS

The activities envisaged under the RIAC are of low to moderate risk type. However, each subproject activity will be subjected to formal screening to:

- **Check if the proposed subprojects require any further environmental assessments such as ESIA**
- **To identify the key environmental and social impacts**
- **Review the plan at early stage to ensure that it adopts environmental guidelines, criteria and good practices;**
- **Provide environmental guidance for preparing simple ESMP, if appropriate; and**
- **Review contract templates of potential beneficiary firms and ecosystem intermediaries to ensure that they are gender sensitive.**

The environment and social screening procedure will include four steps to ensure that environmental and social impacts are identified, mitigation measures proposed and monitoring measures incorporated, as summarized below:'

7.1 Step 1: Application Screening Using Project Screening Criteria Form

The Environmental and Social Safeguard Specialist at the PCU will review the subproject against the Project Screening Form and the EPA-SL Environmental and Social Screening Forms to assess and determine if there are any relevant environmental and social concerns. Once a Project Brief has been received and reviewed by the RIAC /Project, Steering Committee and/or the PCU. All sub-project components are subject to ADB and EPA-SL compliance and conditions.

7.2 Step 2: Application Screening Using the EPA-SL EIA Screening Form

Some subproject under the RIAC-SL may require EIA License under the EPA Acts 2008/2010 and other national regulations if they are not exempted in the Project Screening Criteria Form and fall under the EPA Acts 2008/2010 prescribed categories. Annex 1 (11.2) contains the EPA-SL Environmental and Social Screening Form (ESSF) which will be used for the screening of subprojects for environmental and social impacts under the EPA Acts 2008/2010. The completed ESSF should be submitted to the PCU

Safeguard Expert(s) for checks before submission to the EPA-SL. Where required the PCU should ensure it is adequately communicated to the beneficiaries/applicants that compliance and permits are obtained during the implementation of the subproject.

7.2.1 ESIA Study Using the EPA-SL Process

An ESIA enables both environmental, climate change and social issues to be considered during all stages of subproject design and implementation. It identifies, predicts, evaluates and communicates the potential environmental, climate, and social impacts and risks of projects in a systematic and objective way. It also recommends appropriate preventive actions and mitigating measures, and maximizes environmental opportunities where possible.

The ESIA Report must cover, among others:

- **Administrative and institutional arrangements required for environmentally sound implementation of the environmental management, applicable national and international**
- **environmental legal and policy frameworks and their relevance to the project;**
- **A detailed description of the proposed project components, as well as all ancillary works including location, technologies to be used, materials and their quantities, construction period etc.;**
- **A detailed description the biophysical and socio-economic baseline conditions, bearing in mind that these provide the basis for impact analysis and monitoring; A description of other ongoing or planned developments in the project area that could have cumulative or synergistic effects on the project outcome;**
- **Outcome of stakeholder consultations and public participation;**
- **Identification and analysis of potential adverse and beneficial impacts;**
- **Analysis of alternatives, including project sites, access options, technologies, construction methodologies, and a 'no project' alternative;**
- **Preventative, mitigation and enhancement measures;**
- **Environmental and social management plan (ESMP – which includes climate risk resilience proposals);**
- **Monitoring and auditing requirements and procedures;**
- **Costs for environmental and social management and monitoring. As ESIAs and ESMPs are done in tandem with project design development, it is important that:**
- **Stakeholder concerns – particularly those of the communities and project affected persons -are addressed in the ESMPs, and if they are not, reasons for doing so should be explained;**
- **Stakeholder concerns should be communicated to the design team; and**

- **The project design should be presented to the communities.**

The ESIAs are prepared by the project proponents, who may request assistance from consultants.

The section below illustrates the steps involved during an ESIA study and management process as per EPA Acts that will lead to the review and approval of subprojects under the RIAC project.

7.2.1.1 Stage One – Registration

1. Project Proponent/Developer is required to register the project proposal through an application

process. The letter is addressed to the EPA-SL Executive Chairperson and copied to the Director for the attention of the EIA Committee. 2. EIA Application and Screening Forms are issued to the Project Proponent/Developer after a payment of two hundred thousand Leones (Le 200,000) at an account designated for EIA's application fees. The Project Proponent is required to return duly completed forms to the EPA-SL office.

7.2.1.2 Stage Two – Project Screening

1. Project proposal and Screening Forms are screened to determine if the development proposal

should be subject to an EIA and, if so, the level of detail required.

2. This stage of the EIA licensing process is expected to be completed within two weeks.

7.2.1.3 Stage Three – Scoping

This is to determine the depth of the environmental assessment, i.e., the scope of factors to be considered, the parties involved and their interest and concerns, the appropriate level of efforts and analysis, and to prepare guidelines for the conduct of the EIA.

- ✓ **After the project has been classified and a determination is made that the activity requires an EIA Licence, the Proponent will be required to submit an ESIA Scoping Report on the project.**
- ✓ **The EPA-SL and the Project Proponent will agree on the Terms of Reference (ToR) before the commencement of the ESIA studies.**
- ✓ **Upon receipt of the EIA Scoping Report, the process for the determination of the ToR shall be within two weeks.**

- ✓ **EPA-SL staff will visit the location of the project before approval of the ToR.**

7.2.1.4 Stage Four – Environmental and Social Impact Studies and Preparation of the Report

1. Upon approval of the ToR the Proponent undertakes the ESIA studies.

2. The ESIA report must document clearly and impartially the project's impacts, the proposed

measure for mitigation, the significance of effects and impacts on the environment, and the concerns of the interested public and the communities affected by the project. In this regard, management plans including the environmental and social management plan (ESMP), community development and action plan (CDAP), resettlement action plans (RAP), etc., must be clearly articulated in the document.

3. Upon completion of the ESIA studies, the Proponent should submit eighteen (18) hard and soft copies of the ESIA report to the EPA-SL for circulation to the EPA-SL's Board members and other relevant professional bodies.

7.2.1.5 Stage Five – Review of the ESIA Report

The EPA-SL will determine whether the ESIA report meets the terms of reference and provides a satisfactory assessment of the proposed project and contains the information required for decision making. The ESIA report will be publicized in gazette and circulated too professional

organizations by the EPA-SL for comments.

The Proponent will have to disclose the ESIA report through publication of dates for disclosure in newspapers, and hold two or more public hearing meetings for public participation in the decision–making process. The placement of the ESIA report in specific places will enable the affected or interested persons to make comments on the ESIA studies and submit to the EPASL for decision making. The EPA-SL staff will also visit the site or operational areas of the project to ascertain the component and content of the ESIA report in the review stage.

Depending on the location of the project the proponent will be required to make announcements over the media in the local languages.

7.2.1.6 Stage Six – Decision Making

1. This is the stage where the ESIA report is approved or rejected.

2. The EPA-SL Board is vested with the power to approve or reject an application for an EIA

Licence. If an application for an EIA Licence is approved, it will be subjected to the terms

and conditions, provided by the Board and is issued for twelve (12) months and subjected to renewal annually.

Also, licence fees must be paid as prescribed by the EPA-SL.

3. When an application has been rejected by the EPA-SL Board, the proponent has the right to

seek legal redress.

7.2.1.7 Stage Seven – Compliance and Enforcement

. This is the implementation stage; environmental monitoring and auditing of the project activities will be undertaken to ensure compliance with the terms and conditions of the EPA Act 2008 and 2010

8.0 Environment and Social Instruments

A number of environmental and social instruments will be prepared to meet the requirements relevant to the ISS and Sierra Leone laws. The Environmental and Social Management Officers at PMU will be responsible for the preparation of Terms of Reference for all ES instruments to be prepared under the project based on the outcomes of the screening exercise. The ADB will review and approved these ToRs before they are issued out as part of RFPs consultants who bid for the preparation of these instruments. These are:

8.1 Sub Project Environmental and Management Plans (ESMPs)

For sub projects of this with site specific impacts/risks that are largely reversible, ESMPs should suffice. The ESMPs will be prepared by the Ministry and will be reviewed and approved by the PMU, once approved by the Africa Development Bank. Social and Environmental Clauses and management plans will be inserted into the Bidding document and Works Contracts of the various sub projects. Sub project ESMPs including their accompanying contractual clauses will be included as an integral part of any works or supervision contract for each Sub Project.

Sub-Project E&S Instruments required documents such as Site-Specific ESMP will be prepared by the E&S officer and review by the Environmental and Social specialists (one each) to be recruited by the RIAC/PMU. The specialists will use field visits, literature review, stakeholder engagement and physical measurement of parameters during the preparation of these instruments.

8.1.1 Stakeholder Engagement Plan (SEP)

The preliminary SEP is prepared and cleared by the ADB; the SEP will be updated during project life cycle. This will ensure that local stakeholders including farmers, vulnerable groups, religious traditional authorities and local government functionaries, the general public and the media are identified, and their interests and views integrated into project design and implementation. The SEP will also present accessible, transparent and participatory channels through which stakeholders can air and resolve grievances arising out of project implementation. The RIAC will implement the SEP using the Social Development Officer recruited by the PMU as the focal person.

8.1.2 Labor Management Plans

Sub Project Contractors will prepare for the approval of ADB, sub project/site specific Labor management plans to guide recruitment and Labor relations. The Labor Management Plans will be guided by the requirements of ADB and Sierra Leone Labor laws. Sub Project Contractors will be expected to implement the mitigation measures in the various sub project LMPs under the direct supervision of the Sub Project Consultants and monitoring by the Social Development Officer at the RIAC/ PMU

8.1.3. Abbreviated Resettlement and Resettlement Action Plans

When sub projects will lead to involuntary resettlement and land acquisition, the Ministry will prepare the abbreviated resettlement action plans or resettlement action plans in line with the requirements of ISS3 and Sierra Leone laws depending on the magnitude of resettlement impacts. The RIAC will be expected to fund the implementation of any Abbreviated Resettlement Action Plan /Resettlement Action Plan under this project. The Bank may support with training and capacity building activities to enhance to livelihood restoration efforts of PAPs. The Social Development Officer at the PMU will be focal person for RAP issues if any.

8.1.4 Review and Approval of E&S Instruments

Sub project instruments will be prepared (through Consultants) and then reviewed by the PMU. The RIAC/ PMU will forward the updated instruments to ADB for review and approval.

8.1.5 Environmental and Social Monitoring

The E&S management Unit of the PMU will be in charge of E&S monitoring. Two types of monitoring reports will be required from the PMU:

a. **<u>Monthly Progress Reports</u>**

Works Contractors and Consultants will submit Monthly Progress Reports to the RIAC/ PMU with a section dedicated to progress on the implementation of E&S mitigation

measures/plans outlined in the Sub Project ESMP as well as E&S non-compliances issues and timelines for compliance, incidence/accident reports, status of grievances received in the reporting month and emerging E&S issues, among others.

b. Quarterly Reports

The RIAC/PMU will compile a summary of the E&S issues on the Project in a quarter and submit to the Bank in the Quarterly Report. This will report on the following issues; progress of physical works, progress on OHS and COVID 19 mitigation measures, GBV awareness/sensitization trainings, E&S impacts/risks associated with project implementation, performance of the Grievance Redress System, challenges as well as the environmental and social performance of contractors implementing various sub projects, among others.

c. Annual Reports

Annual third- monitoring reports and a Project completion report on the overall ESMF implementation during the entire duration of the project will also be prepared by the environmental specialists.

d. EPA Monitoring

EPA will conduct biannual compliance monitoring as per their regulation.

9.0 Consultation and Disclosure

9.1 Stakeholder Consultations

With the outbreak and spread of COVID-19, people have been advised, or may be mandated by national law, to exercise social distancing and specifically to avoid public gatherings to prevent and reduce the risk of the virus transmission. Sierra Leone has taken various restrictive measures including imposing strict restrictions on public gatherings, meetings and people's movement. Consultations were held from the 2nd to 10th of July with the Ministry of Agriculture and other line Ministries and agencies such as (EPA-SL, SLARI, SLESCA, NAFRA, SLeSCA, SLeCAD, NaFFSL, Njala University etc. At local level, a wide range of consultations were held with local communities and beneficiaries, CBOs, NGOs, private actors and religious chiefs.

Once the COVID situation improves, greater priority will be placed on outreach to and consultations with different stakeholder groups' including farmers in Sierra Leone especially poor and marginalized groups such as female headed households to ensure that these groups share the benefits of the project.

9.2 Further Public Consultations

Public consultations are critical in preparing effective and sustainable projects. However,

with the outbreak and spread of COVID-19, people have been advised, or may be mandated by national law, to exercise social distancing, and specifically to avoid public gatherings to prevent and reduce the risk of the virus transmission. The Government has taken various restrictive measures, some imposing strict restrictions on public gatherings, meetings and people's movement, and others advising against public group events. The general public is becoming increasingly aware and concerned about the risks of transmission, particularly through social interactions at large gatherings.

These restrictions have implications for public consultation and stakeholder engagement in projects, both under implementation and preparation. WHO has issued technical guidance in dealing with COVID-19, including: (i) Risk Communication and Community Engagement Action Plan Guidance Preparedness and Response; (ii) Risk Communication and Community engagement readiness and response; (iii) COVID-19 risk communication package for healthcare facilities; (iv) Getting the workplace ready for COVID-19; and (v) a guide to preventing and addressing social stigma associated with COVID-19? It is important that the alternative ways of managing consultation and stakeholder engagement discussed with the team are in accordance with the local applicable guidelines, especially those related to media and communication.

In light of above discussion, the stakeholder consultation is designed to meet project and stakeholder needs keeping in view the following guidance:

- **Review the COVID-19 spread situation in the project area, and the restrictions put in place by the team to contain virus spread;**
- **Be sure that all team members articulate and express their understandings on social behavior and good hygiene practices, and that any stakeholder engagement events be preceded with the procedure of articulating such hygienic practices.**
- **Avoid public gatherings (taking into account national restrictions), including public hearings, workshops and community meetings, and minimize direct interaction between project staff and beneficiaries / affected people;**
- **If smaller meetings are permitted, conduct consultations in small-group sessions, such as focus group meetings;**
- **Diversify means of communication and rely more on social media and online channels. Where possible and appropriate, create dedicated online platforms and chat groups appropriate for the purpose, based on the type and category of stakeholders;**
- **Employ traditional channels of communications (TV, newspaper, radio, dedicated phone-lines, public announcements and mail) when stakeholders do not have access to online channels or do not use them frequently. Such channels can also be highly effective in conveying relevant information to stakeholders, and allow them to provide their feedback and suggestions;**
- **Employ online communication tools to design virtual workshops in situations where large meetings and workshops are essential, given the preparatory stage of the**

project. WebEx, Skype, and in low ICT capacity situations, audio meetings, can be effective tools to design virtual workshops.

9.3 Disclosure of Information

Complete documentation will be maintained for the entire ESMF implementation process. This will include the following:

- **Environmental and social monitoring checklists filled by the focal persons and specialists,**
- **Visit reports and monitoring reports with photographs prepared by the Environmental and social staff,**
- **Training reports to be prepared by focal persons and Environment Specialist and Social Specialist,**
- **Quarterly reports on overall ESMF implementation of the project, to be prepared by the specialists,**
- **Annual third-party monitoring reports,**
- **Project completion report on overall ESMF implementation during the entire duration of the project to be prepared by specialists.**

The environmental and social specialists will be responsible for overall E&S preparation, documentation, implementation, supervision and reporting. Additional reporting requirements may be included in the ESMPs of the subprojects.

The ESMF shall be uploaded on the project websites. The ESMF shall be disclosed internally within the Bank and shall be released. Before start of physical works on the project, the ESMF shall be translated in local languages and shall be communicated to stakeholder communities and will be uploaded on RIAC websites. The ESMPs of the sub-projects will also be disclosed and available on official websites of the implementing agencies.

The Stakeholder Engagement Plan will be disclosed on the Bank's website and on the RIAC and social media page. Furthermore, information prior and during project implementation will be made available through brochures in local languages in the districts and urban areas where activities will be conducted. Social media will be used to disclose information about the project and information will be transmitted through TV and radio, mainly in local languages. through the Local Authorities will be responsible for the project launch and disclosure of the SEP, GRM and other required documents so that the community is made aware of channels to bring out their complaints or concerns. All views and feedback will be recorded.

9.4 Grievance Redress Mechanisms

Relevant stakeholders can use the Grievance and Complain mechanism that has been approved by the Bank and the Government for the former and completed Project Additional Financing to bring their grievances to the attention of the project as mentioned before has it has been strengthened and adapted for this project.

The GRM has regulated the means and tools to settle complaints and address grievances of the project beneficiaries and stakeholders and has stated the policies for the improvement of the performance of the project intervention. To ensure that the public has a safe, reliable and accountable means for their grievance to be heard, a specific mechanism of the following main features will be established.

An appropriate and context specific mechanism for Grievance Redressal for the project in their respective sub-projects has been developed. The Regional Office will establish a Grievance Redressal Committee (GRC) to implement sub-project level GRM. The GRC will be responsible for the resolution of complaints including complaints related to environment and social performance of the sub-projects.

Scope: The scope of GRM will be for the entire project. The objective is to help project management to enhance operational efficiency by generating public awareness about the project and its objectives; deterring fraud and corruption; mitigating risk; providing project staff with practical suggestions/feedback that allows them to be more accountable, transparent, and responsive to beneficiaries; assessing the effectiveness of internal organizational processes; and increasing stakeholder involvement in the project.

The PMU will develop operating procedures, guidelines, and flowcharts detailing how the grievance redress process will function within the project's operating structures and how it will be monitored and reported on. Grievance redress processes will be part of the project's operational manual.

The GRM presented here is equally applicable to both basic grievance redress systems and those that are oriented to Management Information System (MIS). In applying this mechanism, project managers must consider the project's unique operating context i.e. types of services delivered, beneficiaries' needs, and technical, financial, and human resource constraints.

Organizational commitment: The project's management and staff recognize and value the grievance process as a means of strengthening social development, improving public relations, and enhancing accountability and transparency. Grievance redress is integrated into the project's core activities. The PMU will regularly review grievances data and trends at project management meetings. The Project Director will also ensure that the GRC is properly staffed and resourced.

Principals: The project will be committed to apply six core principles of an effective GRM as bellow.

i. **Treat grievances confidentially, assessed impartially, and maintain transparently;**
ii. **Operate independently to guarantee objective and impartial treatment to all**
iii. **Adopt simple and understandable procedures and accessible to all irrespective to remoteness, language, education and income levels;**

iv. **Be responsive to the needs of all complainants and take effective action and respond efficiently to the grievances;**
v. **All grievances, simple or complex, will be addressed and resolved in a swift, decisive, and constructive manner; and**
vi. **By adopting a participatory and social inclusion approach.**

The project team and GRC members will be committed and experienced in learning opportunities, systematic review and feedback processes. For a large decentralized mechanism, the PMU will accord high priority to the GRM.

Process: Grievance redress processes play an important role in project activities. The PMU will clearly define and publicize the six stages of the "value chain," i.e.

- **Uptake or grievance collection method;**
- **how it will sort and process the grievances;**
- **how it will send acknowledgment receipts and follow-up the grievance;**
- **what verification, investigation, and action tools will be used;**
- **monitoring and evaluation process; and feedback to the PAP, organization, donor and the stakeholders. The value chain of an effective GRM is further defined in the Table below.**

Table 10: Value Chain of an Effective GRE

GRM Area	Activities /Action Required
Complaint uptake and receipt	• **A specific e-mail id and phone number for receiving feedback (e.g., inquiries, suggestions, concerns, and grievances).** • **Will set up a suggestion/grievance box that is easy to access.** • **Will designate a GRM Officer to receive, log, monitor, and track grievances.** • **Grievances can be registered in grievance logbooks manually.**
Grievance sorting, processing, investigation, and action	• **Will suggest timeframes and procedures to receive, log, monitor, and track grievances and respond to complainants.** • **Will assign GR resolution responsibilities to existing staff (e.g., those involved in monitoring and evaluation)**
Monitoring, tracking, and evaluation	• **Design a simple, easy-to-use, excel-based or log-book-based grievance registration and monitoring database (this can be converted into a real-time web-based database if the number of grievances is high and resources permit).** • **Regularly review feedback received, cases resolved, and GR trends in project management meetings,**

communication for effective GRMs	• **Present GR processes to the stakeholders.** • **Design, create and disseminate a brochure on "Providing complaints feedback" in local languages.** • **Include a line inviting feedback on all project publication/communication material.**

The PMU will regularly analyze reports and other monitoring and evaluation data on grievances. Grievance-related data will provide management with insights into the effectiveness of the PMU programs and identify problem areas, improve internal processes, enhance service delivery, and reduce the incidence of grievances in the future

9.4.1 Grievance Redress Institutions
9.4.2 Community/Facility Level Focal Persons

In communities, where sub projects will be implemented two focal persons (one male; one female) will be nominated to act as community focal persons. Their roles will be to receive and transmit grievances to the Sub Project Redress Committee and provide feedback to aggrieved parties. They will also provide information about the project to the general public. The focal persons will be the first point of contact between the project and the general public in communities where sub projects will be implemented.

Upon notification of a grievance, a Community Focal Person shall complete Complaint Form and also the Grievance Notification Form which will be given to the aggrieved party. If the grievance is within the remit of the focal persons, they will resolve it and document the resolution in the close-out Form to be co-signed by the aggrieved party and sent to the Sub-Project Grievance Redress Committee. If the grievance is beyond the focal person, they will escalate it to the Sub Project Grievance Redress Committee within 2 days.

9.4.1.1 Sub Project Grievance Redress Committee
Sub Project Grievance Redress Committees will be formed in each of the beneficiary communities comprising of:

- **Regional Social Officer RIAC/ PMU;**
- **Regional Gender Officer of RIAC PMU**
- **The Project Consultant;**
- **Traditional Authority representative**
- **A representative of local religious leader;**
- **A representative of the Police;**
- **A representative of GBV Service Provider at the District Level;**
- **A woman representative.**

The functions of these committees will be to receive, investigate and resolve grievances related to civil works and Project Contractors and/or issues in relation to the Sub Project. Aggrieved parties will be required to channel their grievances to

the Sub Project GRC through any means including their community focal persons, verbal narration to the Committee, hot line telephone calls, text messages and letters. The Committee shall seek guidance and refer specialised cases to the relevant Authorities such as the Police in cases such as Gender Based Violence.

The Committee will sit as and when complaints are lodged. The grievance redress process, at this level, shall follow the chain below in resolving grievances, including introducing any other initiatives that could compliment the effectiveness of the process:

- **Receive grievances (login in);**
- **Acknowledgement of grievances;**
- **Verification, investigation, negotiations, and actions;**
- **Monitoring and evaluation;**
- **Provide feedback to parties;**
- **Agreement secured;**
- **Follow up; and**
- **Signing off.**

Grievances will be received and transmitted on to an official form and the aggrieved party will be duly notified within 3 days of lodging a complaint. If the grievance can be resolved by the Grievance Committee, corrective actions will be determined. After the case is investigated, evaluated and corrective action determined, the proposed solutions or corrective/preventive actions shall be discussed with the complainant within the timeframe for the implementation of the corrective measures. If the resolution of the grievance requires commitment beyond the Sub Project Grievance Redress Committee, the members shall coordinate and consult with the relevant authorities. The party responsible for implementing the corrective measures shall be recorded in the Grievance Closeout Form. Once an agreement has been reached between the aggrieved party and the party responsible for the corrective actions, the aggrieved party will be asked to sign off the grievance Closeout Form.

If the aggrieved party remains dissatisfied with the outcome, additional corrective action will be agreed on and carried out by the responsible party. The Sub Project Grievance Redress Committee will have to address grievance it receives within 10 working days.

9.4.1.2 Project Level Grievance Committee.

If the Sub Project Level Grievance Redress Committee fails to resolve a grievance, a second appeal shall be lodged at the Project Level GRC domiciled in the RIAC PMU. The Project Level Grievance Redress Committee shall follow similar processes as the Sub Project Level GRC. The Project Level GRC will consist of:

- **The Project Co-ordinator at the PIU of the RIAC project.**

- **A representative of the Ministry of Social Welfare and Children affairs,**
- **A representative from the Ministry of Gender Affairs.**
- **Social Development Expert at the PMU**
- **Representative FSU of the Police;**
- **National level GBV Service Provider; and**
- **Representative of the PAP.**

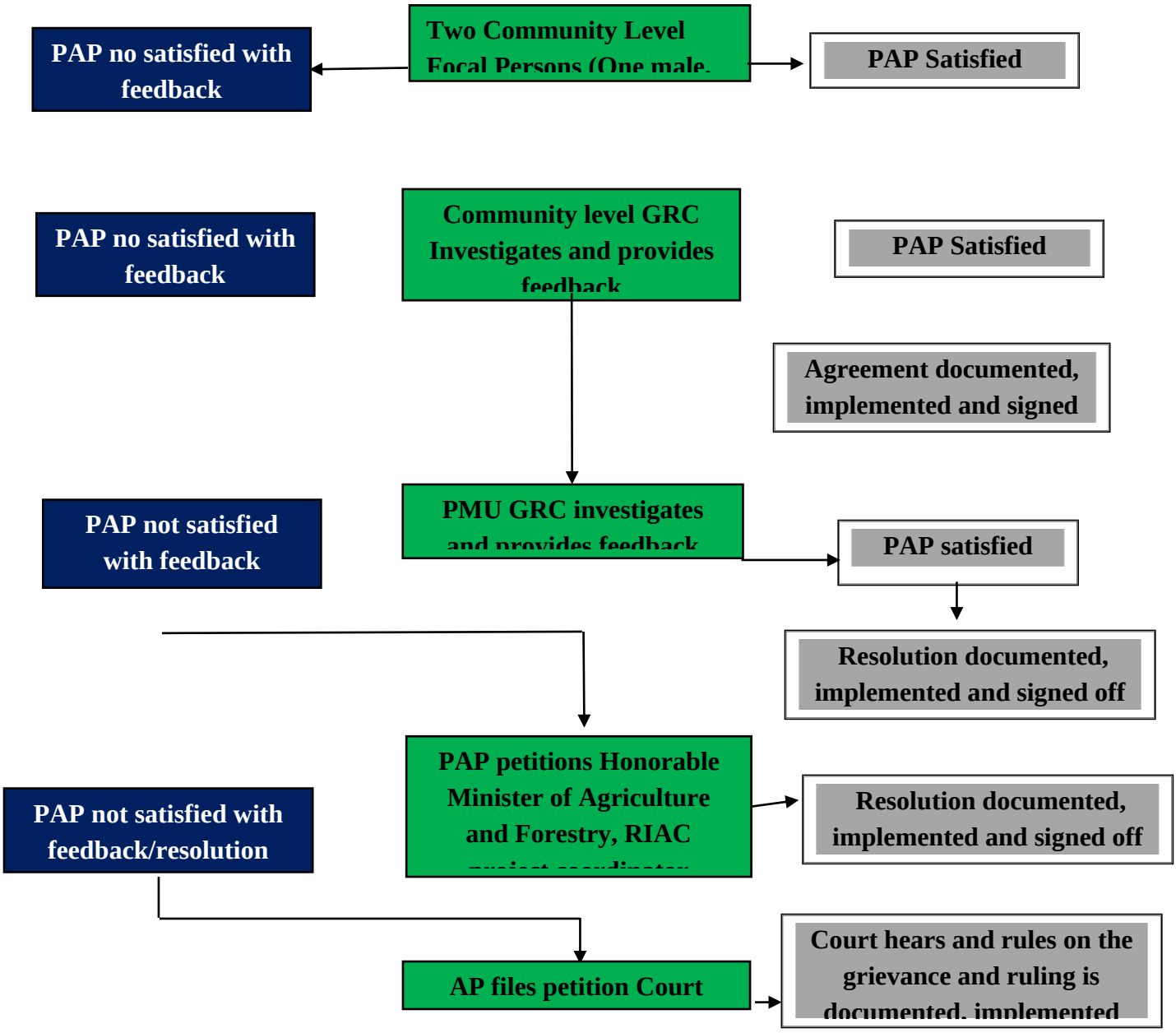
If the Project Level Grievance Redress Committee fails to resolve an issue, then the aggrieved person can petition the Honourable Minister, Ministry of Agriculture and Forestry. The duration for resolving a grievance at the Grievance Redress Committee at the RIAC PMU shall normally be a maximum of twenty (10) working days. The Committee shall seek guidance and refer specialised cases to the relevant Authorities. All GBV issues will be reported to the Police for investigation and prosecution.

9.4.1.3 Minister of Ministry of Agriculture and Forestry.

Aggrieved parties who are dissatisfied with the outcome of the Project Level GRC process can petition the Honourable Minister directly.

9.4.1.4 Court of Law
If the affected person is still not satisfied, they may choose to exercise their right under Sierra Leone law to refer the matter to a court of law.

Figure 4: Grievance Redressal



10.0 Project Implementation Arrangements, Responsibilities and Capacity Building

10.1 Institutional Arrangements

The Project Management Unit will have overall responsibility to implement the RIAC Project. The Agriculture Ministry will establish a PMU within the Ministry. The Project Director of the Project at PMU will have overall responsibility for ensuring compliance with ES requirements as set out in this ESMF. The RIAC regional office will have dedicated E&S units to support the Project Director. The Project Regional Office will have one Gender Officer and Two (2) ESS Officers (One social and (1) ESS**). The PMU will also have one environmental specialist, One Social safeguards Specialist and a gender expert.**

The environmental specialist and social safeguard specialist of the Management Unit of the PMU will be responsible for reviewing project related Environment and Social safety instruments such as screening reports, ESIAs and ESMPs, ensuring that sub project ESMPs and E&S clauses are inserted into Contractors bidding documents as well as monitoring environmental and OHS aspects of the project during implementation. He/ She will be responsible for preparing quarterly reports, which will indicate compliance with OHS and environmental mitigation measures proposed in the Sub Project ESMPs etc. for the Bank's review. The Environmental Officer will ensure that the project complies with OS1, OS2, OS3, OS4 and OS5 requirements.

The Environmental Officer will be expected to liaise closely with other relevant government agencies and stakeholders at national and regional levels for to ensure that the implementation of the sub projects conform to national environmental policies.

The Social Officer will be responsible for reviewing project related social ES instruments such as screening reports, LMPs, and ESMPs. The Social Safeguard Specialist will be handling the Grievance mechanism process implementation. He/ She will ensure that the sub projects are designed and implemented in accordance with OS1, OS2, OS3, OS4 and OS5 requirements together with Sierra Leone Labor laws.

The Social Officer will also be responsible for disclosing approved social ES instruments such as Sub Project in the event land acquisition for this RIAC project and sub projects that may leads to involuntary resettlement. He/ She will disclose hotlines for purpose of receiving grievances during the implementation of the project.

Gender Officer at the RIAC/PMU will also be responsible for monitoring the implementation of Labor and GVB/SEA mitigation measures in the ESMF, Sub Project ESMPs and other ES instruments during the preparation and implementation of all project components. The Social Officer will also coordinate training and sensitization program on social management, OHS and related issues including inclusion of Sexual harassment, sexual exploitation and Gender base violence.

Regional Environmental, Social and Gender Officers will be appointed to support the appointed officers at the PMU (national level). Specifically, they will be responsible for

monthly environmental and social monitoring and reporting on sub projects within their jurisdiction. They also under environmental and social due diligence of Companies to ensure they compile with the requirements of OS1, OS2, OS3, OS4 and OS5. They will also be part of the grievance redress mechanisms at the sub project level. Regional level environmental, social and gender officers will be responsible for screening of sub projects within their jurisdictions, preparing and submitting screening reports to the PIU for review.

10.1.1 Seed Producing Entities

a) **Improved Seed Enterprise will be responsible for the production and distribution of certified seeds to the target farmers**

10.1.2 Project Consultants

b) **Project Consultants will be responsible for the day-to-day supervision of civil works to be undertaken at the selected facilities/infrastructure, preparing monthly progress and quarterly reports and ensuring that mitigation measures proposed in the sub project ESMPs/ESIAs are implemented. Supervising Consultants will also be responsible for ensuring that non-compliance issues identified by the PMU Unit are implemented within the stipulated timeframes. They will also ensure that resolutions of grievance redress committees and institutions established under the project involving the Contractor are implemented within the specific time frame to the satisfaction of the aggrieved party. Supervising Consultants for works will have to field a qualified E&S expert on their teams. Consultant will also be used in the running of training and sensitization program as well as preparation of various waste shed management plans and other plans on behalf of RIAC project.**

10.1.3 Project Contractors

c) **Project Contractors will be responsible for implementing civil works under sub components 1,1 1.2, and 1.3, that is, the rehabilitation/extension of irrigation schemes, construction of soil conservation and rain harvest infrastructure as well as. The establishment of new processing and storage facilities. As part of their deliverables, they will be submitting progress and monitoring reports to the PMU. Contractors will also be responsible for implementing sub project ESMPs, E&S clauses in their contracts and instructions issued by the Supervising Consultant including those dealing with E&S non-compliance. Works contractors will be responsible for implementing work place OHS measures including those in the WHO guidelines that prevent and contain the spread of COVID 19 within the work environment. Contractors will have to ensure that employees of Sub Contract sign formal contracts and the Codes of Conducts.**

10.1.4 The Africa Development Bank Team

d) **The African Development Bank will maintain an oversight role to ensure compliance with its Environmental and Social Standards. The Bank will also review and provide clearance/approval for E&S documents. The Bank will conduct regular Implementation Support Mission during project implementation and monitor the progress of the project in general, including compliance with the Bank's Environmental and Social Standards and recommend measures to improve the delivery of the project and enhance the capacity of the borrower in managing and monitoring the project's E&S impacts/risks.**

10.1.5 Monitoring

ESMF monitoring will be carried out at three levels. At the PMU level, the environment and social specialists will carry out ESMF monitoring to ensure that the mitigation plans are being effectively implemented. At the field level, more frequent ESMF monitoring will be carried out by the relevant staff (E&S Officer and Supervision Engineer) under the guidance and supervision of Social and Environment Specialists. Monitoring checklists will be prepared, and the sub-project specific mitigation plans will be included in the ESMPs. Finally, the project will engage firms to conduct external monitoring as third-party validation on an annual basis. The sub-project specific monitoring requirements will be defined in the respective ESMP.

10.1.5 Internal monitoring and reporting:

At the provincial level, the E&S officers, together with local government representative will be responsible for monitoring the implementation of mitigation measures, set out in Environment and Social Management Plans (ESMPs). Relevant practical indicators to enable effective monitoring will be identified by E&S staff in close liaison with the PMU team and during consultations on possible impacts of sub-project activities and during the preparation of ESMPs.

Monitoring information together with other information collected from various stakeholders (e.g. representatives of farmers, local government officials in sub-project districts, local NGOs and contractors etc.) together with observations of project activities will be reported on monthly basis to the Environmental specialist.

Monthly monitoring reports from regional E&S staff will be submitted to E&S specialists at core team and include:

a. **List of consultations held, including locations and dates, name of**

participants and occupations

b. **Main points arising from consultations including any agreements reached**
c. **A record of grievance applications and grievances dealt with**
d. **Monitoring data on environmental and social measures detailed in ESMPs.**
e. **Number of construction supervision reports that include assessment of contractor's compliance in accordance with the ESMF.**
f. **Number of trainings of community groups in environmental and social issues.**

The various components of the subprojects environment likely to be impacted by project activities and the associated impact indicators are identified and are listed in Table 25 below. Likewise, the sources of probable impacts from the various stages of subproject are also outlined in Table10

Table 11: Impactable Components and Associated Impact Indicators

S/N	Impactable Components of the Environment	Impact Indicators	Monitoring Frequency	Responsible Organization	Cost of Monitoring	Source of Funding
1	Air	Particulates, NOx, SOx, CO, H2S	(2) Twice per year. Raining season and dry season	Environmental Consulting Services	USD 5000 per quarter	ADB
2	Surface Water	Dissolved/suspended Solids, Nutrients, Heavy metals, and pH.	(2) Twice per year. Raining season and dry season	Environmental Consulting Services	USD 10,000	ADB
3	Hydrology	Drainage/Discharge, Hydrologic Balance, Sedimentation, Flooding	Annually	NWRMA	USD 10,000	ADB
4	Soil/Land	Erosion, Fertility/Farming, Hunting, Recreation.	Annually	Njala University	USD 5000	ADB
5	Ecology	Diversity and abundance of terrestrial flora & fauna, habitats quality	Annually	Environmental Consulting Services	USD 15,000	ADB
6	Archaeological Sites	Cultural relics, Cultural Sites	Annually	Department of History University of Sierra Leone	USD 10,000	ADB
7	Noise & Vibration	Daytime disturbance, Hearing loss, Communication Interference, Night time disturbance	(2) Twice per year. Raining season and dry season	Environmental Consulting Services	USD 10,000	ADB

8	**Socio-Economic/Health**	**Population, Social Structure, GBV, Labor Influx Income, Settlement pattern, Employment, Agriculture, Health, Safety, and Security.**	**Quarterly Per Year**	**Economic Policy Research Development and Statistic consulting (EPRDS)**	**USD 40,000**	**ADB**
9	**Wildlife & Forestry**	**Habitat fragmentation, accessibility to conservation areas, loss of economic trees, forced migration of species, endangered species.**	**Annually**	**Environmental Consulting Services**	**USD 15,000**	**ADB**
10	**Climate**	**Humidity, temperature, rainfall, wind speed, and direction**	**Quarterly**	**Metrological Agency in Sierra Leone**	**USD 5000**	**ADB**
TOTAL					**USD 125,000**	**ADB**

The Environment Protection Agency team members will prepare consolidated quarterly monitoring reports from the site reports for the PMU which in addition to the above data will include:

a. **Number of national, regional and provincial staff and counterparts trained on**
b. **ESMF B, ESMF compliance number of AFDB cleared ESMPs, abbreviated ESMPs and E&S certificates prepared and cleared c. Number of technical audit recommendations that have been implemented**

10.1.6 External Monitoring:

An independent annual technical audit of both environmental and social measures will be conducted by an entity acceptable both to the ADB and the Government. The Environmental Protection Agency (EPA) is responsible for monitoring potential environmental impacts and will be considered as a possible organization to carry out independent monitoring and recommend corrective measures to ADB. The audit will inter alia, assess whether (i) the ESMF process is being correctly adhered to (ii) relevant mitigation measures have been identified and implemented effectively and (iii) the extent to which all stakeholder groups are involved in sub project implementation. The audit will also indicate whether any amendments are required in the ESMF approach to improve its effectiveness and ensure that the sub-project ESMPs are developed/cleared and effectively implemented. The nature of the subprojects in focus do not warrant to require significant changes in the ESMF. However, just in case, if the amendments in the ESMF are significant, WB's review and approval will be needed and the disclosure protocols will be decided in this case as well.

10.1.7 Capacity Building and Training

The objectives of the environmental and social trainings include providing basic knowledge and information on the key environmental and social issues associated with the proposed interventions to the key project personnel including the E&S / gender officers, other PMU staff, and project beneficiaries.

The environmental and social specialists will be responsible for the implementation of training plan, including providing trainings. At the subproject sites, the field staff will be responsible to provide such trainings to their construction staff and workers. Additional capacity building requirements may be included in the ESMPs of the sub-projects.

Table 12: Environmental and Social Training Plan

Thematic	Level (national, District)	Target Stakeholders	Number of sessions	Quantity	Total Cost in Leones	Total Cost (US Dollars)	Source of funding
Component 1: Enhancement of Agricultural Production Systems;							
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub-component 1.1.- Establishment of Rice Agro Industrial Cluster							
Sub-component 1.1 Strengthening of sustainable rice production and intensification		Farmer Cooperatives CBOs related to farming and forestry related activities Local communities Authorities	4	200	Le 40,800,000	USD 40,000	ADB
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Land Acquisition, Sub section 1.1 restrictions on land Use and involuntary resettlement	• Land management laws and their provisions • SEP • Involuntary settlements and project design alternatives • Mitigation of unavoidable adverse social and economic impacts from land acquisition or restrictions on land use Improvement of living condition of poor and vulnerable persons	Participant. EPA, Project staff, PMU, Ministry of Lands, Ministry of Local Government, Ministry of Gender Affairs and Civil Society, local media 3, the project Irrigation officer. Tea break and lunch refreshment. Per diem	4	100	Le 153,000,000	USD 15,000	Project funds
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub-component 2.3 – Strengthening the capacity of MAF investment planning and implementation		The Ministry of MAF	1	20	Le 102,000,000	USD 10,000	ADB

Thematic	Level (national, District)	Target Stakeholders	Number of sessions	Quantity	Total Cost in Leones	Total Cost (US Dollars)	Source of funding
Code of Conduct Sub Project 1.2	•Stakeholder mapping and engagement •GRM and local community engagement •GBV training (GBV action plan)	RIAC regional staff members, Farmers, Project field staff, local stakeholders Participants) tea break and Lunch refreshment	10	15 per session	Le 204,000,000	USD 20,000	MAF/ADB
Sub-component 2.4 - Infrastructure development:							
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub-component 2.2 Support to national food safety and security		MAFs EPA Ministry of Trade and Industry Local communities	5	50	Le 255,000,000	USD 25,000	ADB
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub project 1.3 Assessment of social and environmental risks and impacts	•ESMP, •screening methodology •EPA guidelines •National laws	Participant. EPA, Project staff, PMU, Ministry of water resources, Ministry of Lands, Ministry of Local Government, Ministry of Gender Affairs and the water regulatory Agency, Civil Society, local media 3, the project Irrigation officer. Tea break and lunch refreshment. Per diem	2	2	Le 510,000,000	USD 50,000	ADB
Sub-component 1.3 –Promoting market access							
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub-component 1.3-Value Addition and Market Linkages		Farmer Cooperatives CBOs related to farming and forestry related activities		50 Per Session.	Le 510,000,000	USD,50,000	ADB

		Local County Authorities					
Component 2: Private sector support							
Sub-component 2.1 - Access to farm inputs and finance:							
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub project 2.1 Labor Management Procedures Training	• **Labor laws and standards** • **OHS and EHSGs** • **Rights and obligation of various affected parties** • **Employment conditions** **GRM**	**Participant. EPA, Project staff, PMU, Ministry of water resources, Ministry of Lands, Ministry of Local Government, Ministry of Gender Affairs and the water regulatory Agency, Civil Society, local media 3, the project Irrigation officer. Tea break and lunch refreshment. Per diem**	**4**	**25 Per Session**	**Le 102,000,000**	**USD 10,000**	**MAF/ADB**
Sub-component 2.2 - Skills development- targeted and demand-driven							
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub-component 2.2 Strengthening participatory farmer advisory services		**Farmer Cooperatives CBOs related to farming and forestry related activities**	**4**	**100**	**Le 153,000,000**	**USD 15,000**	**ADB**
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Resource and pollution prevention and Management	• **Water laws** • **Resource and pollution management tools** **Pesticide and pest management**	**EPA, Project staff, PMU, Ministry of water resources, Ministry of Lands, Ministry of Local Government, Ministry of Gender Affairs and the water regulatory Agency, Civil Society, local media 3, the project Irrigation**	**4**	**20 Persons Per Session**	**Le 204,000,000**	**USD 20,000**	**ADB**

		officer. Tea break and lunch refreshment. Per diem					
Sub-component 2.3 - Youth and women entrepreneurship							
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub-component 2.3 Capacity development of agricultural research institutions		**SLARI, SLARIS, PMU, MAFs, Njala University, SCaDep etc**	**2**	**25**	**Le 102,000,000**	**USD 10,000**	**MAF/ADB**
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub Project 3.1 Training on Environmental Awareness, women role in domestic water conservation and Waste-water Management at Community Level	**•Awareness on importance of domestic water conservation and to facilitate in adoption of appropriate measures to conserve water at household level. •To provide awareness to the community about water pollution and pollutants so that the communities could adopt appropriate measures to prevent water pollution**	**Participant youth Men, and women for the watershed management training. Tea break and lunch**	**5**	**250**	**Le 510,000,000**	**USD 50,000**	**ADB**
Component 3: Project management, monitoring and evaluation							
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub Project 3.1 Community Participatory Monitoring Grievance redress mechanisms for both men and women	**Importance of community participation on monitoring of the sub-project implementation (to enhance project ownership, transparency and accountability) •Dispute resolution management and grievance redress mechanisms**	**participant, formers, Irrigation officer and project staff. Participants both men and women). stationary, lunch and tea break refreshment**	**4**	**100**	**Le 163,200,000**	**USD 16,000**	**MAF/ADB**
Sub-component 3.1 – Monitoring and evaluation; and Knowledge management:							

Thematic	Level (national, District)	Target Stakeholders	Number of sessions	Quantity	Total Cost in Leones	Total Cost (US Dollars)	Source of funding
Community health and safety	ESA on construction and design safety of irrigation and water harvesting structures; risk disclosure and universal access; traffic and road safety assessment; health and safety guidelines for project affected parties RHA (Risk Hazard Assessment) and preparation of ERP for COVID 19- Introduction of Risk Communication and Community Engagement Action Plan Guidance on COVID-19	Participant. EPA, Project staff, PMU, Ministry of water resources, Ministry of Lands, Ministry of Local Government, Ministry of Gender Affairs and the water regulatory Agency, Civil Society, local media 3, the project Irrigation officer. Tea break and lunch refreshment. Per diem	4	200	Le 255,000,000	USD 25,000	ADB
Sub-component 3.2 Project management and coordination							
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub Project 3.2 Focus on AfDB Safeguards policy, FAO ESS and National Environmental and Social Law	National and Regional staff with Government Line Ministry.	PMU EPA Farmer Cooperatives CBOs related to farming and forestry related activities	2	40	Le 102,000,000	USD 10,000	ADB, MAF and EPA
Thematic	**Level (national, District)**	**Target Stakeholders**	**Number of sessions**	**Quantity**	**Total Cost in Leones**	**Total Cost (US Dollars)**	**Source of funding**
Sub Project 3.2 Biodiversity Conservation and sustainable management	• Protection and conservation of biodiversity and habitats • Mitigation hierarchy • Sustainable management of living natural resources • Livelihood promotion of local communities Protection of cultural heritage	Participant. EPA, Project staff, PMU, Ministry of Lands, Ministry of Local Government, Ministry of Gender Affairs and Civil Society, local media 3, the project Irrigation officer. Tea break and lunch refreshment.	2	50	Le 255,000,000	USD 25,000	ADB

	• **SEP in protection of cultural heritage** **Equitable sharing of benefits from the use of cultural heritage.**	**Per diem**					
Grand Total					**Le3,988,200,000**	**USD 391,000**	

6.1. Itemized estimates of the Budget for the implementation of the project environmental and social due diligence (in local currency and US dollars, and source of financing) including for compensation, if relevant.

Table 13: Environmental and Social Mitigation Cost of the ESMF

No	Item	Unit	Unit Cost		Total		Source of financing
			Local	US$	Local	US$	
1	Preparation of specific ESIA and subproject ESIA/ESMPs An ESIA or ESMP Report will be prepared for all project communities,	4 report for the project affected communities.	306,000,000	30,000	1,442,000,000	140,000	RIAC/ADB Project Funds
2	Implementation of specific ESMP	-	-	-	618,000,000	60,000	RIAC/ADB Project Funds
3	Mid-term audit of Environmental and Social performance		-	-	10,300,000	10,000	RIAC/ADB Project Funds
4	Completion audit of ES performance	-	-	-	257,500,000	25,000	RIAC/ADB Project Funds
.5	Implementation of the consultation and communication				257,500,000	25,000	RIAC/ADB Project Funds
6	Implementation of GRM	-	-	-	309,000,000	30,000	RIAC/ADB Project Funds
7	Annual audit of Environmental and Social performance	4 reports One report for each of the project beneficiary communities	51,000,000	5,000	309,000,000	30,000	RIAC/ADB Project Funds

8	**Total**	**3,203,300,000**	**320,000**	

10.2 CONCLUSION

This ESMF has been prepared to guide the RIAC-SL planners, implementers and other stakeholders to identify and mitigate environmental and social impacts in the RIAC Project. This ESMF will apply to any subproject activity within the RIAC project. It is also to be appreciated that the subproject sites proposed for the RIAC are dynamic and prone to environmental and social impacts that may be generated from activities of other future development projects. These impacts may affect the subproject locations for the RIAC project.

Successful implementation of this ESMF will depend to a large extent on the involvement and participation of the RIAC beneficiaries, particularly the implementing partners, SME agro processors, affected communities and key stakeholders. Specifically, it is recommended that environmental and social awareness and education for the RIAC beneficiaries, particularly the implementing partners, SME agro processors, affected communities and key stakeholders must be an integral part of the ESMF implementation.

The PCU should be assisted to develop appropriate information management systems to support the environmental and social management process. The Environmental and Social Safeguard Specialists and M&E Officers within the PCU, MAF and/or SMEs should be empowered to adequately administer the ESMF and should be given the necessary support and resources to ensure effective implementation.
In the future as subprojects are implemented, additional public consultation may also occur through the ESIA process and through the interaction with the beneficiary communities. Those additional public consultations will be part of the RIAC implementation process and will not be documented in this ESMF.

References

- **African Development Bank Group African: Safeguards and Sustainability Series:**
- **Environmental and Social Management Framework (ESMF) for The Gambia Agriculture and Food Security Project (GAFSP)**
- **Environmental Protection Agency Act of 2008 in Sierra Leone**
- **Global Agriculture and Food Security Program (GAFSP) Public Sector Window 2019 Call for Proposals; Smallholder Agriculture Development for Food and Nutrition Security**
- **Reynolds, T.W., Waddington, S.R., Anderson, C.L. *et al.* Environmental impacts and constraints associated with the production of major food crops in Sub-Saharan Africa and South Asia. *Food Sec.* 7, 795–822 (2015).**
- **UN Convention on Biological Diversity (CBD) (1992)**
- **UN Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) (1979)**
- **UN Convention on the Rights of Persons with Disabilities (CRPD) (2006)**
- **UN Framework Convention on Climate Change (UNFCCC) (1994)**
- **United Nations (2001) Convention to Combat Desertification (CCD) (1994)**
- **USAID (2009). Environmental Guidelines for Small-Scale Activities in Africa**
- **WB IFC (2007) EHS General Guidelines**
- **World Bank (2010). Environmental and Social Management Framework (ESMF).**

ANNEX 1: STAKEHOLDERS CONSULTATION PROCESS

Stakeholder Contacted and Venue	Dates	Objective
EPA-SL	2nd July 2021	Introduction and objectives of the project In his opening remarks, the Consultant, for the RIAC project welcome everybody for taking their precious to partake in the proposed project deliberations. Mr. Abdulai Conteh gave a brief background and objectives of the RIAC project in Bonthe and Pujehun District respectively. He informed the August body that, the overall strategic objective of this RIAC project is to achieve rice self-sufficiency in Sierra Leone through the development of the rice value chain to improve livelihoods. He went further to inform the gathering that, the specific objectives of this project are to transform the potentials of two contiguous stretches of agricultural land (totalling about 92,300 hectares) in Torma Bum and Gbondapie in the Bonthe and Pujehun Districts of Sierra Leone respectively. The consultant said that, the proposed Rice Agro Industrial Cluster Project (RAIC) will consist of four components as follows: Component 1: Enhancement of Agricultural Production Systems; Component 2: Green Industrial Cluster Development;
SLARI,	2nd July 2021	
SLESCA	3rd July 2021	
NAFRA	4th July 2021	
SLeSCA,	5th July 2021	
SLeCAD	6th July 2021	
NaFFSL	7th July 2021	
Njala University	8th July 2021	
CBOs, NGOs	9th July 2021	
Religious Leaders and Chief	10th July 2021	

		Component 3: Capacity Building and Institutional Strengthening; **Component 4: Project Management** **he went further to inform all the audience that, there are going to be some Environmental concerns during the project implementation phase such as physical clearing, excavation of soils, Social issues, biophysical issues etc. He however informs the stakeholders that, efforts will be made to mitigate all of the project impact to acceptable level.** **He informed the meetings that where impacts are inevitable, the assessment shall be carried out to ensure that the appropriate mitigation measures are recommended and implemented** **He concluded by saying that, the project will contribute by providing Market linkages there by providing jobs to smallholder farmers especially women and youthful populations by building and strengthening their capacities, training of farmers on modern and mechanized farming methods and overall, improve the living standards of the small holder farmers within the Tormabum and Gbondapi community within the Bonthe and Pujehun District.** **Rationale of the Public Consultations** **The Consultant informed the meetings that the rationale for the public consultations is for information sharing with stakeholders (including the implementation partners) to seek their opinion, learn from their experiences of similar past projects, hear their concerns to help in better planning of the proposed project activities. That form the consultations of ESMF report to developed which will be used by future consultants to develop sub-project ESIA/ESMPs to address the potential negative environmental and social impacts that may be caused by the Project.**
Remarks and comments received at the meetings		
Stakeholder (s)		**Feedbacks, concerns, remarks, and recommendations**

Representative of the FOE department at EPA-SL (Mr. Aiah Kembay)	**The representative of the FOE department said that they were very happy for this project that is geared towards food production and sufficiency. He however cautions that, this rice production project may likely get some key challenges in its implementation phase and the agency may like to see the various mitigation methods been used to addressed the project ESIA, ESMP documents.** **The proposed project should consider reconstructing the dam and/or irrigation schemes.** **A nice irrigation mechanism should be put in place in all the project areas to ensure the viability of this project.** **Community sensitization and education activities should be put in place to educated the project beneficiaries about the various treaties to which Sierra Leone is a signatory and on body should hunting or kill animals along the project areas and they should prevent the hunting of animals around farming plots; ongoing EHS and first Aid training should be carried out frequently, especially during the wet season.** **Provision of safe drinking water for farmers should be considered, Facilities should be erected on various farming plots to accommodate farmers during the wet season;** **The dam should be built on larger bodies of water to enhance the purpose for which it was constructed; and There should appropriate decommissioning exercise at all project sites after constructing activities.**
SLARI,	**The representative from SLARI is more concern about the type of rice variety to be planted at the Torma-bum and Gbondapi areas and the type of market model that the RIAC project is going to embark on in order for the project to be successful.** **They are also concern with the type of agricultural training or capacity building activities which this project is going to pass on to the local communities.**
SLESCA	**The representative from SLESCA said that, their organization is concern with the support and collaborate with the MAF, farmers and food processors using**

	platforms like farmers market, where in the project will give farmers all the opportunities to showcase their fresh farm **produce and thus allowing them to develop the value chain as well as allow for growth in agriculture, job opportunities etc**
NAFRA	**The representative from NAFRA is interested to know how is the project going to address the agribusiness development within the RIAC project communities in Bonthe and Pujehun District as his organization believe in agrobusiness as the bedrock of the Country GDP.** **addressing the issue of standards, they believe that the areas where production is taking place should be** **taken into consideration. And they will be looking at where the products are coming from and that is were** **standardization must start. Where the farmers will benefit from the project should be clearly captured in the Draft** **ESMF Report. We cannot say it is an oversight or neglect but we want to see it in this document where the farmers will be interrelated in addressing the environmental issues which are pertinent to their areas of activities**
SLeSCA,	**The representative from SLeSCA is concern to knowledge transfer not only within the project communities, but how can this project rollout its rice value chain models to other parts of the country there by fulfilling one of the objectives of the President for Food Self-sufficiency, capacity building of CBOs, communities and NGOs.**
SLeCAD	**The various project communities within the two districts have never experience any land conflict. They however advice that the PIU and PMU should make sure that, necessary and transparent arrangement is been done to all land owners in order for them to see the transparency of the proposed project should consider appropriate education for farmers relative to the implementation of the project;** **There has been no recorded land dispute in all of the targeted beneficiary communities and its areas of influence;**

	The project should consider farm to market road construction and rehabilitation to enable farmers sell their products.
NaFFSL	**The representative from NAFFSL is interested to know how is the project going to address the agribusiness development within the RIAC project communities in Bonthe and Pujehun District as his organization believe in agrobusiness as the bedrock of the Country GDP.** **addressing the issue of standards, they believe that the areas where production is taking place should be** **taken into consideration. And they will be looking at where the products are coming from and that is were** **standardization must start. Where the farmers will benefit from the project should be clearly captured in the Draft** **ESMF Report. We cannot say it is an oversight or neglect but we want to see it in this document where the farmers will be interrelated in addressing the environmental issues which are pertinent to their areas of activities**
Njala University	**Representative from Njala University is concern about the drainage patters, flooding and soil stability. And what measure has the project put in place to mitigate the impacts**
CBOs, NGOs	**The various project communities within the two districts have never experience any land conflict. They however advice that the PIU and PMU should make sure that, necessary and transparent arrangement is been done to all land owners in order for them to see the transparency of the proposed project should consider appropriate education for farmers relative to the implementation of the project;** **There has been no recorded land dispute in all of the targeted beneficiary communities and its areas of influence;** **The project should consider farm to market road construction and rehabilitation to enable farmers sell their products.**
Religious Leaders and Chief	**The religious leaders and chiefs are concern with land arrangements and ownership, compensation issues and conflict resolution.**

ANNEX 2: SME FIELD APPRAISAL (SITE VISIT) CHECKLIST

Environmental and Social Safeguard Specialist will visit the subproject or SME beneficiary/applicants as required. During such visit, the Environmental Safeguard Specialist will examine the physical condition of the area where the subproject activities are taking place, to verify the information from the project site. (EPA-SL and ESS) and to ascertain if there are any issues, which may represent environmental or social risks.
The SME Field Appraisal Checklist below will assist the Environmental Safeguard Specialist in conducting the site visit, and in documenting and reporting the social, environmental and safety conditions at the sites.

1. Key Processes

(List the key processes, physical activities, waste products, and emission from the project activities)

2. Environmental Risks
(List any potential environmental issues and discuss how the potential project beneficiary is managing and controlling these risks)

3. Environmental Opportunities
(List the key opportunities for improvement, and discuss these with the potential project beneficiary if appropriate)

4. Use this list as a check for indication of the existence or environmental issues of them good/poor management as you go around the site

- **Noise level (high or low)**
- **Eye irritation (clean or dusty)**
- **Past use of land (could indicate contamination of ground)**
- **Storage of hazardous or polluting materials, by- products or waste (check method of disposal for environmental impact)**
- **Underground storage of liquids (difficult to see leakage but ask about how management control possibility of leaks).**
- **Proximity to residential areas (close or distant) Proximity to polluting source e.g., neighboring community or industry (could contaminate beneficiary property) Proximity to water courses (indicates likelihood of contamination by accident/leakage).**
- **Health and safety record (good or bad).**
- **Level of housekeeping in general (good or bad)**
- **Nature of air emission from chimney or stacks (clean or dirty), and adequacy of emission control measures**

5. Financial Issues

- **What are the annual costs for user fees, past fines/penalties?**
- **What is the required capital or operational investment costs for environmental improvements in the short/long term?**
- **Are environmental costs incorporated into the project Environmental plan and other financial projections?**

6 Legal Issues

- **Have there been any environmental notices or orders served on the RIAC project which restrict activities?**
- **Does the RIAC project of MAF have all the required environmental permits?**
- **Is the Ministry of Agriculture and Forestry aware of their legal obligations as far as permits or emission standards is concerned?**

7. Reputational Issues

- **Is the project exposed to reputational risk through the beneficiaries' activities (e.g., handling hazardous products, high local emissions, or disturbing the local community)?**
- **What steps has the beneficiary taken to control any reputational or environmental issues, if applicable?**

8. Management Issues

- **Is there someone with responsibility for environmental matters?**
- **Do they seem well informed and able to manage their environmental responsibilities?**
- **Do they produce documentation in a timely manner?**

9. Social Issues

- **Have any social issues been identified in any of the Annex checklist?**
- **Are there any labour, health and safety, or other social issues apparent during the site visit?**

10. Conclusions and Recommendations

- **Add any conclusion and recommendation, including:**
- **Any further environmental appraisal required;**

Because of the on-site visit, the Environmental Safeguard Specialist may recommend environmental management or reporting activities, which would apply throughout the life of the subproject. If irregularities, complexities, permit gaps, or any problems are found during the screening process, a plan to correct them and improve management of the beneficiary may be appropriate. In such case an ESMP would be developed and included in the subproject. Guidelines for preparing an ESMP are included in Annex of this ESMF report. These recommendations may also be included in the site visit report and incorporated into the subproject.

ANNEX 3: GUIDELINES FOR PREPARING AN ESMP

When a RIAC subproject evaluation has included a Field Appraisal and it is determined that distinct mitigation measures are required, an ESMP needs to be included with the beneficiary/SME application. The SME Field Appraisal Checklist and the ES will guide the Requirements of the ESMP.

An ESMP usually includes the following components:

- **Description of adverse effects: A description of the possible adverse effects that the ESMP is intended to deal with are identified and summarized.**

- **Description of feasible mitigation measures: A description of planned mitigation measures, and how and when they will be implemented. Each measure is described with reference to the effect(s) it is intended to deal with. As needed, detailed plans, designs, equipment descriptions, and operating procedures are described.**

- **Description of monitoring program: Monitoring provides information on the environmental effects of the subproject – both positive and negative. It helps identify how well mitigation measures are working, and where better mitigation may be needed.**

- **The monitoring program: The Monitoring should identify what information will be collected, how, where and how often. It should also indicate at what level of effect there would be a need for further mitigation.**

- **Responsibilities: A description of who will be responsible for implementing the ESMP:**

- **The people, groups, or organizations that will carry out the mitigation and monitoring**

- **Activities are defined, as well as to whom they report. There may be a need to train people to carry out these responsibilities, and to provide them with equipment and supplies.**

- **Implementation schedule: The timing, frequency and duration of mitigation measures and monitoring are specified in an implementation schedule, and linked to the overall Cost estimates and sources of funds.**

- **Mitigation and monitoring activities as the subproject is implemented. Funds to implement the ESMP may form part of investment.**

- **The scale of the subproject will determine the length of the ESMP. A small- scale activity ESMP can be elaborated in a few paragraphs or in tabular format, keeping it as simple as possible with concrete mitigation actions, timelines and responsible persons.**

Table 14: ESMP Mitigation Plan

Subproject Activity	Potential Environmental or Social Impacts	Proposed Mitigation Measures	Responsibility (including enforcement and coordination	Monitoring Requirements (including supervision)	Time Frame Or Schedule	Cost Estimate
[type here]	[type here]	[type here]	[type here]	[type here]	[type here]	[type here]

[type here]	[type here]	[type here]	[type here]	[type here]	[type here]	[type here]

The above matrix should be filled out for each subproject that will have the need for a separate ESMP (the screening process using the screening checklist and forms should determine this).

ANNEXES 4: TERMS AND REFERENCE (TOR) FOR THE ESMF

TERMS OF REFERENCE

INDIVIDUAL CONSULTANT FOR THE PREPARATION OF AN ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF) FOR RICE AGRO INDUSTRIAL CLUSTER (RAIC) PROJECT IN SIERRA LEONE

1. Background

Agriculture including forestry and fisheries is the backbone of the economy and the main source of livelihoods in Sierra Leone. It employs about 70% - 75% of the active labour force and contributed close to 50% of the country's economic GDP in 2017. The agriculture sector is heavily dominated by the production of staple crops, mainly rice, maize and cassava, accounting for over three-quarters of the sector's output. The country is endowed with sufficient land and water resources favorable to agriculture but despite this potential, both production and productivity are low as a result of the reliance on rain-fed subsistence farming practices.

The Government of Sierra Leone has secured funding from the African Development Bank to finance the Rice Agro Industrial Cluster (RAIC) Project. The overall strategic objective is to promote food security in Sierra Leone through development of rice value chains to improve livelihoods. The specific objective is to transform the potentials of two contiguous stretches of agricultural land (totaling about 200,000 hectares) in Torma Bum and Gbondapie in the Bonthe and Pujehun Districts of Sierra Leone into breadbasket.

2. Project description

Project Design: The project shall consist of three (3) components with subcomponents as follows:

Component 1: Industrial cluster development

Component 2: Private sector support

Component 3: Project management, monitoring and evaluation

3. Purpose of the ESMF

The primary purpose of this Consultancy service is to prepare an Environmental and Social Management Framework (ESMF) to be used for the implementation of the Project. The ESMF is a statement of the policy, principles, institutional arrangements and procedures that the project proponents will follow in each subproject in addressing environmental and social issues. The Environmental and Social Management

Frameworks (ESMF) is used in the case of operations with multiple subprojects whose detailed engineering design, precise location and the entire gamut of environmental and social safeguard issues involved are not fully known. It spells out corporate environmental and social safeguard policy frameworks, institutional arrangements and capacity available to identify and mitigate potential environmental and social safeguards issues and impacts of each subproject.
The ESMF shall be prepared, accepted, and disclosed publicly, in the Client's country and at the AfDB website before project appraisal by the Bank. These terms of reference (ToR) have been prepared for the purpose of selecting a Consultant to conduct an Environmental and Social Management Framework (ESMF) for the Project.

According to the African Development Bank ISS it is required that an Environmental and Social Management Framework (ESMF) is prepared for the project. The objective of the ESMF is to provide a unified process to address all environmental and social safeguard issues for subprojects at the respective project sites, from preparation, through appraisal and approval, to implementation. It thereby ensures compliance with the Bank's safeguards policies. The ESMF shall describe the process for screening, assessing, identifying, assessing and managing safeguard issues for site-specific project activities and subprojects that will be identified during project preparation and implementation. The ESMF shall cover all project components including any capacity building as well as all works related to the subproject investments.

4. Objectives of the ESMF

In seeking to implement the Project the xxx intends to comply with all relevant national and international environmental requirements in order to meet legal obligations and to ensure sustainable project planning and implementation. The obligations include the following:

- **Compliance with EIA requirements to meet Sierra Leone Environmental Protection Agency Act and the Environmental Assessment Regulations**
- **Conduct of ESMF to meet AfDB Environmental Assessment Guidelines and relevant Bank Safeguard policies and procedures**

To meet the above requirements, the main objectives of the ESMF

- **Describe key project components and activities**
- **Delineate the boundaries of the project and describe existing environmental conditions within the project area of influence.**
- **Identify potentially adverse environmental impacts and risks in the project area of influence;**
- **Assess potentially adverse social issues and impacts related to the implementation of projects activities;**
- **Develop an appropriate stakeholder engagement plan for the project;**

- **Adopt and implement a robust grievance redress mechanism for the project with cost estimates;**
- **Development of measures to avoid, minimize, mitigate or compensate potentially adverse environmental and social impacts and provide guidelines to be incorporated in project designs, construction and operations.**
- **Establish clear procedures and methodologies for the environmental and social planning, review, approval and implementation of subprojects to be financed under the project**
- **Develop screening tool i.e. checklists and guidelines.**
- **Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to subprojects.**
- **Analysis of beneficiary institutions capacities for environmental management and to determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF**
- **Establish the projects funding required to implement the ESMF**
- **Provide practical information resources for implementing the ESMF.**
- **Develop an environmental and social monitoring plan under the projects to ensure that environmental and social issues will be managed effectively.**
- **Development of Periodic environmental reporting instruments such as formats for annual reporting**

DISCLOSURE: The Project will disclose the ESMF as required by the Sierra Leone EIA public notice and review procedures as well as by AfDB ISS.

5. Scope of Work

As part of the assignment, the Consultant is required to visit all the project sites and engage with the relevant stakeholders of the program (in-country consultations and field visits) where subprojects will be proposed, approved and implemented. The Consultant is also required to undertake a detailed analysis of the environmental and social risks posed by the proposed project interventions and incorporate their findings into an ESMF report that will be used in managing environmental and social risks arising out of the project. The ESMF should be in-line with the guidance provided in the AfDB Integrated Safeguards System. The Individual Consultant's Scope of Work for the development of the ESMF includes the following:

1. **Review the Integrated Safeguards System of the African Development Bank with emphasis on the requirements for an ESMF.**
2. **Undertake a gap assessment of national policies and regulations and the (AfDB) environmental and social safeguards policies and standards**
3. **Summarize the project and subprojects environmental and social impacts.**
4. **Prepare an overview of the legislative, regulatory and administrative framework within which the project will operate in Sierra Leone, with a focus on requirements applicable to the planning/design, approval and implementation of subprojects.**

5. **Collect the environmental and social baseline information at national and regional levels of the areas where the project will be implemented**
6. **Outline procedures for conducting an appropriate level of environmental and social assessment of subprojects, consistent with the bank's Operational Safeguards, identifying the impacts to be managed or mitigated.**
7. **Prepare procedures for identifying and screening environmental and social issues of subprojects during project implementation (screening checklists and identification of cumulative, indirect and induced impacts, in line with relevant AfDB E&S safeguards standards and other applicable standards). Screening has the following purposes:**
    a. **screen subprojects for potential environment and social risks and impacts;**
    b. **determine the specific instrument(s) to be prepared for each subproject. Checklist is often useful in screening E&S issues. In this section, the screening checklist should be described and the mechanics of its use on subprojects are to be presented. The actual screening checklist should be presented as an Annex of the ESMF.**
8. **Prepare procedures for preparing and approving site-specific safeguard instruments. These procedures should include:**
    a. **A framework of actions to guide the development of an Environmental and Social Management Plans of subprojects (including identification of mitigation measures;**
    b. **the objective of each measure, its specific implementation requirements and**
    responsibilities, its' technical and operational requirements, including timing, the targets to be achieved and performance indicators for monitoring and supervising the adequacy of safeguard implementation.
    c. **Chance find procedures and management plans to identify and avoid impacts on physical cultural resources in line with AfDB OS 2 requirements.**
    d. **Generic safety measures for infrastructure and construction activities.**
9. **Determination of institutional capacity for implementing the ESMF. This should include an analysis of the authority and capability of the relevant institutions at local, district, county and national levels and their capacity to manage, monitor and supervise the implementation of the ESMF. Also, to be included is a description of the institutional arrangements for project implementation with a focus on points of accountability (who will do what) for specific functions on environmental and social safeguards. This would include a clear definition of roles and responsibilities of project staff and associated agencies in subproject implementation and application of environmental and social review, preparation and implementation of safeguard instruments, monitoring, and evaluation but also training, staffing, budgeting and financial support.**
10. **Outline the requirements for consultation with local communities and stakeholders, both during subproject preparation and ESMP development, and during subproject implementation.**
11. **Outline the grievance redress mechanism to provide stakeholders and potentially affected communities and households avenues to provide feedback**

or grievances, and receive responses, with regard to the implementation of sub-projects throughout the life of the projects.

12. **Outline the requirements for monitoring and subproject supervision to ensure that the management measures are satisfactorily implemented and that the agreed targets for environmental and social protection are achieved. A supervision plan should be prepared with guidance on thresholds or triggers for initiating corrective action and safeguard performance indicators to enable the Bank to evaluate compliance with safeguards and determine the need for corrective actions. As well, include the scope, timing and responsibilities for reporting on the ESMF. This should include specific actions to be taken by the borrower or client to report in a timely manner on failure to implement measures successfully or to meet the desired targets and remedial actions.**
13. **Where needed, outline the requirements for capacity strengthening or training deemed appropriate for the government agency involved in the ESMF implementation or monitoring. This may include the establishment or expansion of an environmental and social management unit within the borrower organization. Other elements may include technical cooperation programs, equipment and supplies procurement and organizational changes.**
14. **Where needed, outline the requirements for technical assistance to communities, service providers and public sector institutions to support the implementation of the ESMF. This may involve supporting studies examining, for example, changing access to natural resources or potential impacts upon a protected area.**
15. **Summarize the in-country disclosure and approval requirements as well as those of the AfDB as applicable to the projects under the program.**
16. **Based on the assessments above, outline an estimated budget for the implementation of the ESMF for subprojects.**

6. Tasks to be performed

The ESMF will take into account all sub-projects pertaining to the different project sites. The ESMF activities to be carried out by the Consultant are outlined in the tasks specified below.

Task 1 Description of proposed project

The Consultant shall present information on (i) location of all project-related development sites and general facilities at project development sites, pre-construction activities, construction activities, schedule, staffing and support, facilities and services, operation and maintenance activities.

The Consultant is also to provide maps to illustrate the general setting of the project-related development sites, as well as surrounding areas, which can be potentially affected. The Consultant shall provide a detailed description of the proposed project components.

Task 2 Description of the Environment

This task entails gathering, evaluating and presenting baseline data on the environmental characteristics of the project(s) area of influence. The purpose is to inform on any

anticipated changes before the start of the projects. This description involves: (i) the physical environment (i.e. topography, geology climate and meteorology, surface water hydrology); (ii) biological environment (i.e. flora types and diversity, rare and endangered species within or adjacent to projects intervention sites, including wetlands, sensitive habitats); (iii) socio-economic and cultural environment, including present and projected, where appropriate (i.e. population, land use, planned development activities, community structure, employment and labour market, sources and distribution of income, cultural properties – such as historical and archaeological significant sites, indigenous people, and traditional tribal lands and customs).

Task 3 Legislative and Regulatory Framework

The Consultant shall identify and briefly discuss the pertinent regulations and standards governing environmental quality, health and safety, protection of sensitive areas, protection of endangered species, climate change, land, social protection, etc., at international, national, regional and local levels. These shall include but not limited to Sierra Leone Environmental Assessment Regulations, Environmental Protection Agency Act.

Task 4 Determination of Potential Impacts of the Projects

The ESMF shall identify and describe all potential significant changes brought about by the projects. These would encompass environmental and social impacts, both positive and negative, as a result of project interventions, such as involuntary resettlement, social conflicts and disturbance, threats to land and natural resources, biodiversity, natural habitats. It is important in this section to differentiate between short, medium and long-term. Also, it is important to assess the environmental awareness and commitment of implementing agencies. Assess the changes brought about by the projects on baseline environmental and social conditions discussed in Task 2.

Describe the extent and quality of available data and any pertinent information deficiencies, which might preclude projection of impacts. Identify and outline Terms of Reference (ToR) for studies designed to bridge information gaps encountered during the study.

Task 5 Analysis of Alternatives of the Proposed Projects

The ESMF should provide an evaluation of reasonable alternatives to fulfill the ultimate development objective of the projects. Assess the extent to which alternatives are more appropriate from an environmental, socioeconomic and cultural standpoint than the proposed projects. Include the counterfactual scenario – not implementing the projects – in order to underline the environmental and social conditions without it.

Task 6 Development of Checklists and Guidelines

A screening mechanism should be developed as a tool to review the scope and magnitude of environmental and social impacts. It should also help determine whether further environmental assessments need to be carried out. The checklist should be accompanied by guidelines for mitigation and integrated into the overall framework for selection of sites for sub projects and other physical works to be undertaken by the project.

Task 7 Development of a Management Plan to Mitigate Negative Impacts

A generic Environmental Management Plan would entail recommending feasible and cost effective measures to prevent, mitigate, compensate or reduce negative impacts. The consultant is to provide cost outlays for the proposed measures, as well as their institutional and capacity building requirements to implement them. This should ideally be presented in a matrix/table format. It is noteworthy that the consultant:

- **Clearly define responsibilities for implementing the environmental management plan in relation to the resources affected by the projects. These should be spelt out and appropriately resources;**
- **Identify arrangements for coordination between the various actors for mitigation.**

Task 8 Institutional Needs Assessment

Assess institutional capacity and discuss measures to strengthen their management, training, staffing, budgeting and financial support. It is important to present in this section cost outlays for environmental capacity building of the implementing agency/agencies.

Task 9 Development of Monitoring Plan

The consultant is to design a monitoring plan for the implementation of mitigation measures. The monitoring plan should clearly indicate the linkages between impacts identified in the ESMF, indicators to be measured, methods to be used, sampling locations, and frequency of measurements and definition of thresholds indicating the need for corrective actions. It is important that all aspects of the monitoring arrangements be appropriately costed and the responsibilities clearly defined. The reporting arrangements for environmental and social management monitoring need to be integrated into the overall monitoring and evaluation program.

Task 10 Inter-agency Coordination and Public/Private Sector/NGO Involvement
The consultant should shall develop an appropriate stakeholder engagement plan (SEP) with a view to assess the feasibility of broad-based participation, involving other government agencies, local NGOs, the private sectors and affected individuals or groups of people. Assess potential benefits resulting from such a broad-based partnership in

implementing and monitoring projects outcomes. The consultant shall prepare for the project a robust grievance redress mechanism (GRM) with a budget for implementation.

7. Reporting

The expected reports of the consultancy service are

i). ESMF

ii). Checklist for Screening sub-projects;

The ESMF report must be concise and should include the following:

- **An executive summary Refer to A.3.1 of the SNSC Business Standards (Annex 1);**
- **An introduction describing the ESMF purpose, objectives, principles and methodology;**
- **A description of the Project and sub components**
- **Projects coordination and implementation arrangements, with details of institutional arrangements for managing the subproject cycle; and annual reporting and performance review requirements;**
- **Policy, legal and administrative framework for environmental and social management;**
- **Description of the potential environmental and social impacts;**
- **Analysis of alternatives;**
- **Environmental and social management plan;**
- **Environmental and social management checklists and guidelines;**
- **Stakeholder Engagement Plan;**
- **Grievance Redress Mechanism;**
- **Monitoring plan;**
- **Description of capacity building, training and technical assistance required to implement the ESMF;**
- **An ESMF implementation budget;**
- **Technical annexes to support ESMF implementation;**
- **Inter-agency and public/private sector/NGO involvement including evidence of stakeholder consultations (comprehensive list of participants with their phone contacts, pictures, etc.);**
- **List of references.**

8. Consulting Team.

The Consultant shall be an individual with skills for interdisciplinary analysis required of a high level ESMF preparation. The individual shall have proven experience and expertise in executing similar jobs with at least 5 years of relevant experience in environmental assessment.

9. Time Frame

The assignment shall be completed within four (4) weeks after signing of contract (excluding time taken by the Client to review reports submitted by the Consultant).

10. Schedule of Deliverables

The Consultant is expected to have the following deliverables:

- **Inception Report with detailed work plan and indicators of performance. This will be discussed by consultant, Client and other experts to ensure quality of final outcome. This will be delivered 3 days after signing of contract;**

- **Draft Report This will be circulated for comments and relevant issues raised incorporated into revised version. Eight copies shall be submitted to the Client. In addition, there consultant will provide an electronic version. This will be delivered three (3) weeks after submission of inception report.**

- **Final Report The final report should include a concise Executive Summary and should have all annexes and bibliography and the dissemination/disclosure plan. This will be delivered one (1) week after submission of Draft report.**