Gambia Climate Smart Rural WASH Development Project (CSRWASHDEP)

SITE SPECIFIC ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (SS-ESMP) FOR PROJECT SITES IN LOWER RIVER REGION

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TABLE OF CONTENTS

LIST OF ACRONMYS

AfDB	African Development Bank
WCR	Central River Region
CSRWASHDEP	Climate Smart Rural WASH Development Project
DCD	Department of Community Development
DOF	Department of Forestry
DOH	Department of Health
DPWM	Department of Parks and Wildlife
DWR	Department of Water Resources
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FGD	Focused Group Discussion
IWRM	Integrated Water Resources Management
LGA	Local Government Authority
LRR	Lower River Region
MDGs	Millennium Development Goals
MEMs	Mitigation and Enhancement Measures
MoFWR&NAM	Ministry of Fisheries and Water Resources & National Assembly Matters
NBR	North Bank Region
NEA	National Environment Agency
NEMA	National Environment Management Act
NEMC	National Environment Management Council
NGO	Non-Government Organization
PMU	Project Management Unit
RWSD	Rural Water Supply Department
SEA	Strategic Environment Assessment
STIs	Sexually Transmitted Infections
SDGs	Sustainable Development Goals
SS-ESMP	Site Specific ESMP
UN	United Nations
URR	Upper River Region
WASH	Water Supply, Sanitation and Hygiene
WB	World Bank
WCR	West Coast Region

LIST OF FIGURES

LIST OF TABLES

EXECUTIVE SUMMARY

The Government of Republic of the Gambia has received grants from the African Development Bank to finance the Climate Smart Rural WASH Development Project at an estimated cost of USD 27.47 million (GMD 1.8845 billion). The purpose of the project is to improve the socio-economic and environmental conditions of the rural and peri-urban population through improved access to sustainable WASH infrastructure and services in the Gambia and will be implemented over approximately 63 months, beginning October 2018. The project is meant to serve water and sanitation needs of 144 communities in rural and peri-urban Gambia. The principal objectives of this project are to:

1. Increase sustainable access to safe water by 17% and access to safely managed sanitation by 2%;
2. Enhance services delivery capacity in the sector; and
3. Improve livelihoods through nurturing safe water and sanitation services-related opportunities for women and youth employment.

In line with the above stated objective, the project has four main components. **Component 1 relates to** Water Supply and Sanitation Infrastructure; **Component 2 focuses on** Capacity Enhancement for Sustainable WASH Services Delivery; **Component 3 seeks to** address Water Resources Management for Improved Livelihoods, whilst **Component 4 deals with** Project Management – Technical Assistance.

Both the Environmental Social Management Framework (ESMF) developed at the very inception of the project in 2018 and the generic Environmental Social Management Plan (ESMP) developed in 2021, revealed that the anticipated impacts of the project are considered low to moderate, limited to the specific site and largely manageable. Consequently, the project has been classified under '**Category B'** in accordance with classification guidelines provided in Schedule 'B' National Environment Management Act, 1994 and the Environmental Impact Assessment Regulations 2014, which classification correspond to *Category –2* of the AfDB's Integrated Safeguard System (ISS).

Accordingly, development of an SS-ESMP was required to deal with site-specific issues and ensure that the project is both environmentally and socially feasible. This SS-ESMP, which focuses on sites in the West Coast Region, is part of the 5 documents developed for the 5 of the administrative regions of The Gambia the project is being implemented, in furtherance of the requirements in the ESMF and the generic ESMP as mentioned above. The aim is to enable the project continued compliance with the applicable national laws as well as the Bank's safeguard policy requirements. This aim is to be achieved through the following specific objectives:

- To identify, through observation and consultation, and assess the potential environmental impacts anticipated to be triggered by the proposed project activities at each site.
- To identify, through consultation with communities by assessing the potential social, economic, and cultural issues anticipated to be triggered by the proposed project activities and proffer measures to mitigate them.

- To Prepare a comprehensive site-specific ESMP that is in line with the national policies and legislative requirements, and AfDB policy requirements related to environmental and social safeguards to be used by contractors in the execution of tasks assigned.

In assessing the site-specific impacts identified with this project, an integrated approach was adopted. This approach took into account a review of the relevant literature, baseline assessment including consultation of the beneficiary communities, observation of the biophysical environment, and independent judgment. This report highlighted both positive and negative impacts anticipated at each of the sites and proposes enhancement and mitigation measures to guide the successful implementation.

Table 1: Summary of Positive Impacts

Impact issue	**Potential Impact**	**Project Phases**
Environmental		
Reduction in Co2 emissions	Less Co2 emission due to the fact that the system will be solar powered instead of connecting to the grid	Operational
Social		
Improved community health and wellbeing	▪ Access to potable drinking water ▪ Reduction in the incidence of water borne diseases ▪ Reduction in drudgery amongst women and girls ▪ Reduction in time spent in fetching water	Operational
Enhanced livestock production	▪ Provision of drinking troughs for animals ▪ Reduction of time in search for drinking points ▪ Reduced security risk in search for drinking points	Operational
Smooth coexistence among communities	▪ Reduction of social tension between livestock owners with rest of the communities competing for water	Operations
Enhance socio-cultural functions/religious rites	Provision of water for purification/ablution	Operation
Employment creation	Communities to be paid through skilled/unskilled labour	Construction

Promotion of trade and commerce	▪ Procurement of construction materials within the communities ▪ Petty trading around the construction sites ▪ Income through rent	Construction
Community empowerment	Knowledge and skill transfer	Construction

Table 2: Summary of potential negative impacts

Impact issue	**Potential impacts**	**Project phases**
Environmental		
Destruction of vegetation cover	Clearing of vegetation for quarries for construction material (Sand, gravel, wood) etc	Construction
Enhances ponds creation	▪ Extraction of construction material from quarries ▪ stagnant water within the tap area ▪ Burst pipes	Construction & Operational
Increase in soil erosion/runoff	▪ Destruction of the soil through the use of heavy equipment on site ▪ Improper backfilling and compaction of trenches ▪ Change in land use	Construction
Increase in water-borne diseases	▪ Waste water discharge points serves as breeding ground for mosquitoes and disease carrying pathogens	Operational
Dust and Noise pollution and cracking of adjacent houses	▪ Excavation and transportation of construction materials ▪ Trench digging using heavy equipment ▪ Use of heavy construction equipment	Construction
Social		
Triggering of Social tension between beneficiaries	▪ Sharing of water supply systems amongst communities	Construction & Operational

Triggering of Social tension between beneficiaries and Migrant workers	▪ Prioritization of migrant workers over locals ▪ Anti-social behaviors eg drinking of Alcohol, misconduct etc.	Construction
Increase in the incidence of GBV/SEA/SH	▪ Influx of migrant workers ▪ Water points remotely located ▪ The use of minors to fetch water in remote locations ▪ Women partaking in construction activities	Construction & Operational
Public Health	▪ Transmission of Sexually Transmitted Infections (STIs) ▪ Exposure to dust and toxic fumes ▪ Transmission of communicable diseases eg Covid, TB etc.	Construction
Occupational health and safety		
Increase in accidents	▪ Injuries to workers due to not wearing of PPEs during the construction phase ▪ Individual and animals falling into trenches	Construction

Table 3: Summary of mitigation and management measures

Impact issue	Potential impacts	Mitigation measures	Responsibility
		Environmental	
Destruction of vegetation cover	Cutting down of trees or pruning of branches	▪ Avoid shady areas for the installation of the solar panels. ▪ Prune branches of trees instead of cutting down the entire trucks ▪ Encourage communities to plant trees in compensation for those lost.	PCU/Contractor
Increase in ponding	Extraction of construction material from quarries	▪ Use existing quarrying sites for supply of construction materials. ▪ Where new quarrying sites will be required,	PCU. Contractor/ communities

		ensure that due process is followed.	
	Waste water within the tap area	▪ Construct waste water containment chambers at each time to avoid uncontrolled spillage of waste water. ▪ Sensitize communities on water conservation. ▪ Encourage formulation of communities' water management committees. ▪ Raise tap stands high to prevent access by children, which may result in wastage of water	
	Burst pipes	Ensure that pipes to be procured for the water networks are pressure-tested and proven to be guaranteed for the purpose	
Increase in soil erosion/runoff	Destruction of the soil through the use of heavy equipment on site	Limit the use of heavy machinery on existing roads to limit soil disturbances	PCU/contractor
	Improper backfilling and compaction of	Ensure that all trenches dug are properly backfilled and compacted upon completion of pipe laying.	
	Trenches	All trenches dug as either as part of pipe laying or through sourcing of construction materials, are properly buried or compacted.	
	Change in land use	Ensure that the perimeters of the boreholes are fenced to prevent incomparable	

		activities within close proximity	
Increase in water-borne diseases	Waste water discharge points serves as breeding ground for mosquitoes and disease carrying pathogens	▪ Limit wastage of water by formulating communities' water management committees. ▪ Conduct sensitization of the communities on water conservation measures. ▪ Conduct sensitization of the communities on water borne diseases.	PCU/NEA/MOH/DCD
Dust and Noise pollution	Excavation and transportation of construction materials	▪ Ensure that trucks use in transportation of construction materials are covered to minimize dust emission. ▪ Trucks transporting construction materials should be made to observe speed limit.	PCU/ Contractor
	Trench digging using heavy equipment	▪ Minimize usage of heavy machinery in digging of tranches to the outskirt of communities. ▪ Sprinkle the ground with water to minimize dust emission	
	Use of heavy construction equipment	Limit the usage of heavy construction materials to day lime only.	
Social			
Triggering of Social tension between beneficiaries	Sharing of water supply systems amongst communities	▪ Traditional structures in the communities should utilized to resolve any conflict. ▪ The communities should be adequately sensitize on their roles and	

		responsibilities in relation to sustainable upkeep of the facilities. ▪ A well-established GRM structure should be in place and adequately resourced to carry out its function	
Triggering of Social tension between beneficiaries and Migrant workers	Prioritization of migrant workers over locals	▪ Community members should be well sensitized on work requirements. ▪ Priorities should be given to hiring of local people based on competence.	
	Anti-social behaviors eg drinking of Alcohol, misconduct etc.	▪ Proper sensitization of the migrant workers on communities` norms, customs and conventions. ▪ A code of conduct should be prepared for each individual worker to sign before they could be engaged in project related works.	
Increase in the incidence of GBV/SEA/SH	Influx of migrant workers	▪ Proper sensitization of the migrant workers on communities` norms, customs and conventions. ▪ A code of conduct should be prepared for each individual worker to sign before they could be engaged in project related works.	
	Water points remotely located	▪ Ensure to locate taps in strategic areas ▪ Sensitize communities on GBV/SEA/SH	

	The use of minors to fetch water in remote locations	▪ Sensitize the communities on SEA/SH ▪ Monitor and report on cases on SEA/SH and child molestation	
	Women partaking in construction activities	▪ sensitize contractors, workers and communities on SEA/SH ▪ Ensure that contractors and each individual worker sign a code of conduct. ▪ Sensitization of the contractors/workers and communities and STIs/STDs	
Public Health	Transmission of Sexually Transmitted Infections (STIs)	Sensitization of the contractors/workers and communities and STIs/STDs	PCU/NEA/MOH
	Risk of respiratory infections due to exposure of dust and toxic fumes	▪ Ensure that workers are provided with adequate PPEs and ensure that they are used. ▪ Utilize dust suppressant measures including regular sprinkling of water	
	Transmission of communicable diseases e.g., Covid, Ebola, TB etc.	▪ Sensitization of communities, contractors and workers on communicable diseases and prevention measures ▪ Ensure health screening for workers.	
Occupational health and safety			
Increase in accidents	Injuries to workers due to not wearing of	▪ Ensure that workers are properly orientated on	PCU /Contractor

	PPEs during the construction phase	work procedures before start of work. ▪ Ensure that workers are provided with adequate PPEs and ensure that they are used.	
	Individual and animals falling into trenches	▪ Trenches dug on public roads should be refilled immediately after the pipes are laid in. ▪ Sealed off areas where trenches are dug with red ribbons to prevent persons falling in and causing injuries	

CHAPTER 1: INTRODUCTION

1.1 Background and Context of the Project

The Republic of the Gambia has received grants from the African Development Bank to finance the Climate Smart Rural WASH Development Project at an estimated cost of UA 27.47 million (GMD 1.88 billion). The purpose of the project is to improve the socio-economic and environmental conditions of the rural and peri-urban population through improved access to sustainable WASH infrastructure and services in the Gambia. The anticipated implementation period is approximately 5 years, beginning October 2018.

1.2 Purpose and Scope of the ESMP

1.2.1 Purpose of the ESMP

In 2018, at the inception of the CSRWASHDEP, an Environmental Social Management Framework (ESMF) was developed on the premise that the specific sites of the project were yet to be decided. The ESMF identified in generic terms, the anticipated environmental and social ramifications of the project interventions, taking into account prevailing circumstances on a national scale. The ESMF considered these anticipated impacts to be site specific and are reversible.

In 2021, a generic ESMP was developed in fulfilment of the Bank's condition precedent. Following the receipt of funds for the first phase of the works, payment for the second phase requires submission and approval of the Site Specific (SS-ESMP). In line with Part V of NEMA 1994, EIA Regulations 2014 and in accordance with Bank`s classification guidelines, the next phase of work is categorized under category 2, which imply that the anticipated impacts are limited to the respective sites and manageable with mitigation measures specific to the sites.

The SS-ESMP is developed in accordance with national environmental safeguards policies and laws as well as donor requirements as this will enable detailed analysis on the specific environmental and social issues at each site and to ensure that their mitigation measures proposed. Thus, enable decision making by all parties to settle for a choice that is with the highly positive economic, environmental, and social impacts and the least negative ramification from environmental and social perspective for the project during implementation and operational stages.

The aim of the SS-ESMP is to enable the project continued compliance with applicable national environmental laws as well as the Bank’s safeguard policy requirements as related to the environment and social issues. The aim is to be met through the following specific objectives:

I. To identify, through observation and consultation, and assess the potential environmental impacts anticipated to be triggered by the proposed project activities at each site.
II. To identify, through consultation with communities by assessing the potential social, economic, and cultural issues anticipated to be triggered by the proposed project activities and proffer measures to mitigate them.
III. To Prepare a comprehensive site-specific ESMP that is in line with the national policy, legislative requirements, and AfDB policy requirements related to environmental and social safeguards to be used by contractors in the execution of their assigned task.

Finally, it is required that the SS-ESMP is subjected to a national approval procedure by the regulatory Agency (NEA). The PCU will therefore be required to submit the draft report to the Agency for it to be subjected to a national validation by the national EIA Working Group.

1.2.2 Scope of the SS ESMP

This report will focus on identifying and addressing the potential social and environmental impacts in each project site in the West Coast Region (WCR). The detailed scope of works includes but not limited to:

- *Literature review*
- *Scoping and Baseline Assessment*
- *Impact Assessment*
- *Legal and Regulatory Framework*
- *Mitigation and Management Measures*
- *Reporting and Documentation*
- *Capacity Building and Training*

CHAPTER 2: POLICY, LEGAL AND REGULATORY FRAMEWORKS

The proposed project triggers a number of national policies, legislation, AfDB`s safeguard instruments as well as international environmental instruments The Gambia subscribed to. These policies, legislation and safeguard instruments are highlighted below.

Table 4: Relevant National Policies

Policy	Implications to the project
Gambia Environment Action Plan, GEAP (2019-2029)	The proposed work activities have several environmental and social implication, all of which needed to be managed properly to ensure the project`s environmental and social viability.
The National Health Policy, 2012-2020	The proposed work activities have some public health implications. The issues of availing clean drinking water to the communities, prevention of communicable diseases during work phase, and control of water borne diseases at operational phase, among other things, are things that augured well with the national health policy.
Early Childhood Development Policy (2016 – 2030)	Involvement of children in proposed project related works during construction phase will significantly impact on their development. The project related work is expected to have a zero tolerant to such practices and therefore in fulfilment of this policy.
National Policy for the Advancement of Gambian Women and Girls (1999-2009)	The impact of lack of adequate water supply impact women and girls disproportionately. The proposed project seeks to address this challenge by ensuring that there are several water drawing points in the community that will significantly cut down on drudgery.
Gambia National Gender & Women Empowerment Policy (2010–2020)	The proposed project activities will involve recruiting for labour in and outside of the communities. There should not be any discrimination when it comes to creating opportunity for both men and women.
National Development Plan (2018-2021)[1]	The proposed project activities seek to improve the quality of life for the population in the rural and peri-urban areas of The Gambia by ensuring access to portable water. Such an objective is cornerstone of the NDP hence the relevance of the policy to the proposed project.

Relevant National Legislation

National Environment Management Act

NEMA[2] is the principal legislative framework for environmental management in The Gambia. It makes provision for a structured institutional arrangement for the sound management of the environment and the natural resources of The Gambia. The NEMA sets up the NEA and empowered it to, among other things,:

- set standards and establish criteria for environmental quality monitoring, effluent discharges and solid waste disposal, to identify processes and activities that are deleterious to human and animal health and the environment at large, and makes

[1] *The Government of The Gambia is in the process of formulating the successor of current NDP namely Green Recovery-focused National Development Plan (2023 - 2027) and also successor of Vision 2020 - Long-Term Development Vision (Vision 2050)*

[2] *Cap 72:01 Vol.12 Laws of the Gambia 2009*

recommendation for and initiates Regulations, Standards and Guidelines for management of those processes and activities;

- prepares guidelines for managing environmental disasters, including oil spills, gas leakages and spillages of other hazardous substances. Through such guidelines, the Agency details out who is responsible for clean-up and what should be done amid such disaster scenarios;
- Appoints Environment Inspectors who are empowered to, inter alia, take samples from places for analysis, seize vessels adjudged to have been used in commission of environmental offenses, sealed off areas that are a subject of investigation and apprehend persons adjudged to have been involved in the commission of environmental offenses; and
- Conducts environmental impact assessment for projects, policies and programmes in accordance with the provision of the Act. Part V of NEMA detailed out the requirement for Environmental Impact Assessment (EIA). Based on the provision of the Act, the Agency developed guidelines and Regulations for the EIA Procedures, Guidelines and Regulations to guide the conduct of EIA in The Gambia.

Environmental Impact Assessment Regulations 2014

These Regulations make provision for projects requiring environmental and social screening due to their environmental and social impacts. It considers the process and procedures that should be followed both by the project proponents on one hand and the Agency on the other hand, to ensure that projects are thoroughly screened for their environmental and social viability prior to their implementation. Thus, CSRWASHDEP is obliged to submit a project brief along with duly filled Screening Forms to the NEA, and make a formal request for environmental approval for the planned works. Based on the submitted dossier, the Agency will internally screen and make a determination based on guidance provided under ***Schedule B***[3] of the Regulations, as to whether a full-scale impact assessment is required or otherwise. The Classification guidelines provided under Schedule B is as follows:

- Class A: The project is anticipated to have adverse impacts due to the potential risk. There will be a need for a detailed environment and social impact assessment.
- Class B: Where the submitted information is insufficient to enable a decision. The Agency will require specific additional information from the developer which could be to submit an ESMP. However, the anticipated impacts under this category are not as significant as those under Class A.
- Class C: Impact are negligible. The Agency can give an approval and impose conditions on the developer upon screening the submission.

Where the Project has negligible potential impact, Environmental Approval may be granted without a full study (an environmental management plan or other conditions may still be required). When there are no significant adverse impacts, the project proponents may proceed without any further analysis. For projects with significant irreversible adverse impacts and not

[3] *Classification of projects/development initiatives based on their potential impacts*

in line with the laws of the Gambia, the project will be rejected without the need for an EIA study.

In addition to the NEMA and the EIA Regulations, there are other relevant environmental legislations relevant to this planned works. The table below gives a summary of all the applicable national legislation, their purpose and relevance to the project`s planned works.

Table 5: National legislation relevant to the Project

Laws/ Regulations	Purpose of Regulations	Relevance to Project
Environmental Quality Standards Regulations, 1999	This legislation proposes environmental quality standards to the NEMC, and to periodically review the standards.	Its mandatory that the CSRWASHDEP operates within the standards set by this law with regards to ambient air, saline waters, surface fresh waters and groundwater
Environmental Discharge (Permitting) Regulations 2001	Pollution Control is established under part VIII of NEMA, and it prohibits the discharge of materials, substances and oil into the environment. It therefore provides for the formulation of the Environmental Management Discharge Permit Regulations	CSRWASHDEP project is obliged to operate within this legislation and not discharge Substances such as oil and other hazardous materials into the Environment during operations
The Local Government Act, 2002	This Act was enacted in 2002 to make provisions for (i) the functions, powers And duties of local authorities, (ii) development in the decentralized governments, (iii) local government civil service, traditional authorities and the co-ordination of local government authorities	Regional authority within Whose administrative area the project falls and a potential supporter in both project and post project era
State Land Act, 1991	Regulates land tenure and property rights as well as general land administration in State Lands areas.	All lands in the Kombo North, Kombo South, and Kombo Central fall under this Act. Potential project sites in these areas are held and administered under this Act
Lands (Regions) Act, 1945	Regulates land tenure and property rights as well as general land administration in areas under Customary Land Tenure system. Act covers all Provinces land outside State Lands Areas.	All lands in the NBR, URR, LRR, and some of parts of WCR (Kombo East and the Foni) fall under this Act. Potential project sites are held and administered under this Act.
Physical Planning and Development Control Act 1991	Ensures developments in The Gambia is in line with Land use planning and construction standards.	The project construction activities shall be in line with national land use and planning rules.

National Biodiversity Strategic Action Plan (NBSAP 2015-2020)	The NBSAP recognizes the Conservation and sustainable use of biodiversity	The NBSAP is designed in compliance with the Strategic Plan of the CBD which is a flexible framework relevant to all biodiversity-related conventions
The Fisheries Policy (2007)	(i) The objective of this policy includes the rational and long-term utilization of the resources (ii) the use of fish as a means of improving the nutritional standards of the population; (iii)increasing employment opportunities in the sector; (iv) increasing foreign exchange earnings etc.	The relevance of this policy to the project seen from pump irrigation perspective is that there is the potential for the activity to affect fish stock in nearby surface waters through excessive use of fertilizers.
The Biodiversity and Wildlife Policy (2001)	Adopted in 2001, the new Biodiversity policy's primary objective is to Define a coherent biodiversity/wildlife policy framework as the basis of biodiversity conservation,	Ensure that the project's activities will be aligned to the objectives of this policy and conducting the ESMP is one way to ensuring this alignment.

The African Development Bank (AfDB) Environmental and Social Safeguards

The Gambia Climate Smart Rural WASH Development Project (CSRWASHDEP) has been categorized by the African Development Bank as ***Category 2 project***: which implies projects likely to have detrimental and site specific environmental and social impacts which can be minimized by the application of mitigation measures to be incorporated in an Environmental and Social management Plan. The Bank's safeguards policies are briefly reviewed as thus;

Integrated Safeguard System (ISS)

The Bank has established an Integrated Safeguard System (ISS) for comprehensive projects review and ensuring across the board perspective of environmental and social linkages of projects. The ISS comprises of four components, all that existed separately but with identifiable operational linkages. The components include:

(i) Integrated safeguard policy statement (ISPS),
(ii) Operational safeguards(OS),
(iii)Environmental and social assessment procedures (ESAPs), and
(iv)Environmental and social impact assessments (ESIAs).

Integrated Safeguard System (ISS) encompasses into five (5) operational safeguards addressing the following fields which are of interest to CSRWASHDEP project:

i. Environment,
ii. Involuntary resettlement,
iii. Gender,
iv. Climate risk management and adaptation,
v. Civil society engagement framework,
vi. Health,

vii. Integrated water Resources management,
viii. Agriculture and rural development, and
ix. Poverty reduction.

The specific safeguards are briefly described below:

Operational Safeguard 1 (OS 1)

This is the main safeguard that guides environment and social assessment as well as climate issues. The safeguard governs the process of determining a projects environment and social assessment requirement. OS is designed to identify, access and manage potential environment and social risks and impacts including climate change issues. More specifically, OS1 intends to achieve the following:

(i) Identify and assess risks and impacts,
(ii) Avoid and/or minimize, risks and impact,
(iii) Provide for stakeholders participation,
(iv) Ensure effective management of risks and impacts, and
(v) Contribute to capacity building elements.

In the categorization requirements under OS1, the five (5) are also considered as support safeguards. Under the safeguards environmental and social impacts assessment (ESIA) studies are undertaken on clearly defined projects while environmental and social management framework (ESMF) is prepared for programmes or plans with a multiplicity of uncertain projects sites.

Operational Safeguard 2 (OS 2)

The safeguard focuses on involuntary resettlements, land acquisition, population displacements and requirements and compensation. It consolidates the policy commitment and requirements on involuntary resettlements and incorporates improvements operational effectiveness.

Operational Safeguards 3 (OS 3)

This safeguard is designed to govern biodiversity and ecosystem services for the conservation and promotion of sustainable use of natural resources. Among the focus is on the integrated water resources management where commitments translated into operational requirements.

Operational Safeguard 4(OS 4)

OS4 governs pollution prevention and control, hazardous materials and resource efficiently. It covers a wide range of impacts arising from pollution, wastes and hazardous materials and particularly those under international conventions and regional standards. This also includes greenhouse accounting. The OS4 principles also support OS1 described above.

Operational safeguard 5 (OS 5)

Labour conditions, health and safety are a major concern in projects. The Bank therefore, has established OS 5 to address requirements concerning works conditions, rights and protection from abuse and/or exploitation.

From reviewing the above safeguard policies in relation to the planned project works, the OS1, Environmental Assessment (EA) is triggered because it is a requirement that all projects proposed for Bank financing must undergo environmental and social impacts assessment.
The anticipated impacts for the planned works as per the baseline field visits and discussed in detail in chapter 6 include but not limited to the following:

- Ponding of waste water leading to water borne diseases
- Open trenches due to pipe laying leading to accidents
- Dust and noise pollutions emanating from the works
- Structural Gender based violence
- Contracting and spreading of STIs/HIV

Table 6: Operational Safeguards triggered by the project

OPERATIONAL SAFEGUARDS TRIGGERED BY THE PROJECT (FOR THE MOMENT)	**YES**	**NO**
OS1: Environmental Assessment	X	
OS2 :Involuntary Resettlement: Land Acquisition, Population Displacement and Compensation		X
OS3: Biodiversity and Ecosystem Services	X	
OS 4: Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials	X	
OS 5: Labour Conditions, Health and Safety	X	

International Conventions/ Protocols

Detailed below in Table 7 are the international convention/protocols ratified by The Gambia relevant to this project.

Table 7: List of international conventions/protocols applicable to the project

Convention/Protocols	**Objective**	**Implications to the planned works**
United Nations Convention on Biological Diversity (CBD)	Convention has three main goals, including the conservation of biological diversity, the sustainable use of its components;	Although the sites of the boreholes are open without big trees. However, to prevent tree branches obscuring the panels from radiation, branches of nearby trees at some of the sites will have to be pruned regularly. shrubs within the perimeter of the identified site for the boreholes will have to be eliminated as well.

United Nations Convention to Combat Desertification (UNCCD)	To combat desertification and mitigate the effects of drought	The sites of the boreholes are already open with little or no vegetation clover. even though the project will not cause any felling of trees; however, no regeneration activity will take place on those lands as this will negatively affect radiation.
UN Framework Convention on Climate Change (UNFCCC)	As a party to the convention, Gambia seeks to contribute to stabilizing greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system	The use of renewable energy sources to facilitate the pumping of water as opposed to fossil fuel will ensure that the project will contribute very little to emission. However, not allow trees to grow very close to the boreholes, will, albeit minimally, reduce the possible of carbon trapping
United Nations Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) and the Optional Protocol to the Convention on the Elimination of All Forms of Discrimination against Women (OP-CEDAW)	The convention highlights women's right to be protected and given equal opportunities and is central to their financial independence. It may be critical to their ability to earn a livelihood through skills acquisition/development.	Women are one of the main targets of the Project and will ensure that they have access to the benefits of this Project in the same way as men.
Stockholm convention on (POPs)	Deals with Persistent Organic Pollutants (POPs)	It is not anticipated that the planned works will result in burning of toxic waste that could potentially release persistent organic pollutants into the atmosphere and therefore posing risk to public health.
Vienna Convention (Convention on the Protection of the Stratospheric Ozone Layer)	Deals with the protection of the Stratospheric Ozone layer	No use of materials with ozone depleting potentials is anticipated from the installation to the operational phases.

CHAPTER 3: PROJECT DESCRIPTION

3.1 Project overview

The proposed project aims to improve water supply and sanitation infrastructure, enhance service delivery capacity, promote water resources management, and ensure effective project management.

3.2 Project objectives

The principal objectives of this project are to:

i) Increase sustainable access to safe water by 17% and access to safely managed sanitation by 2%;
ii) Enhance services delivery capacity in the sector; and
iii) Improve livelihoods through nurturing safe water and sanitation services-related opportunities for women and youth employment.

3.3 Project components and their related activities

The Project has four key core components as follows.

1.**Water Supply and Sanitation Infrastructure**: This involves the rehabilitation, and construction, of new supply and sanitation infrastructure; specific activities include the drilling of boreholes, water troughs for livestock and solid and liquid waste management infrastructure.

2.Capacity Enhancement for Services Delivery: This element will focus on capacity enhancement for integrated water resources management that includes facilitating the establishment of a dedicated government Department for rural water supply and sanitation; other activities include establishment and training of community WASH committees.

3.Water Resources Management for Livelihood Improvement: The water resources management and livelihoods improvement which specific activities include protection of groundwater resources, mitigating effects of floods and sustainable management of liquid and solid waste generated in the communities.

4.Project Management: This final component is Project Management that details arrangements for execution of the project. This component aims to finance all activities to be undertaken by the executing agent for timely delivery of the proposed project's outputs within budget based on detailed work and procurement plans, and quarterly commitment and disbursement plans.

3.4 Project activities and Timelines

The Project envisaged providing potable water supply system in 55 sites across the entire country through activities briefly described below.

3.5.1 Supply and Installation of Elevated Aluminium Water Storage tanks

These water storage tanks will provide storage during pumping and non-pumping periods for the beneficiaries to easily access potable water pumped from the boreholes. The outer tank shell will be made of Aluminium and the inner layers covered with water grade liners to prevent direct water contact with the Aluminium. The tanks will be in various sizes ranging from 50 to 100m3 and are designed to be elevated to heights ranging from 6 to 10m. This is to increase the pressure thereby enhancing distribution of the potable water via gravity for kilometers.
The sequencing of activities involved to supply and install these elevated water tanks are:

1. Conducting detailed engineering studies to confirm the bearing capacity of the underling soil to support the weight of the tanks. The analysis from these studies will be transmitted to the tank manufacturer to design the structural elements of the tank support system to adopt to the various geotechnical conditions.
2. Procurement of the tanks and the support system from abroad. This process can last for months considering that the tanks have to be manufactured upon request prior to being shipped.
3. Preparation of the tanks foundation using reinforced concrete to support the tank steel frame.
4. Installation of the tanks support structures and the tank.
5. Testing the tanks for leakages and functionality prior to commissioning.

3.4.2 Supply and Installation of Solar water Pumping systems

A Solar pumping system comprises of solar arrays, inverters, submersible pumps and the necessary accessories to facilitate the installation of the Pump. These solar arrays utilize solar radiation and convert it to energy (dc current) which is further transformed to AC current through an inverter to power the submersible water pump installed inside the borehole.

The solar panels will be installed and mounted on concrete supports to prevent or mitigate theft. Further protections are done by securing the borehole site with a lockable 2-meter-high perimeter chain link fencing. These solar water pumping systems can be operational from 6 to 8 hours depending on the availability of sunshine and during this pumping period, the surplus water can be stored in the elevated tanks to ensure water availability throughout the day. However, due to the short pumping period, the water use is mainly limited to domestic use and in some instances for animal drinking.

This activity doesn't involve major civil works, the only work required is to construct short reinforced concrete columns to support the solar array configuration.

3.4.3 Supply and Installation of water distribution system

This is the conveyance system installed to make water accessible to the beneficiaries. It involves the digging of trenches to lay water pipes of various diameters that could run for kilometers depending on the size of the communities, the installation of water collection points (taps) and wastewater collection drains (soak-aways). Further provisions are made for the

installation of fire hydrants in case of emergencies and can equally be used as a flushing point to periodically clean the pipes.

This activity requires considerable work due to large volumes of excavation involved. Additionally, the construction of the tap points and drains utilizes lots of materials thus attract more time and labour in constructing the facilities.

3.5 Project location and boundaries

The proposed project intervention communities are all situated in the Lower River Region. This is one of the 7 administrative regions of The Gambia and one of the smallest in both population and land size. Like NBR and WCR, the region occupies only one bank of the river Gambia. In total, the proposed project intervention sites are 4 communities covering 2 of the regions` 6 districts namely: Madina, Bajana, Koli Kunda and Joli in Jarra East and Kiang West respectively.

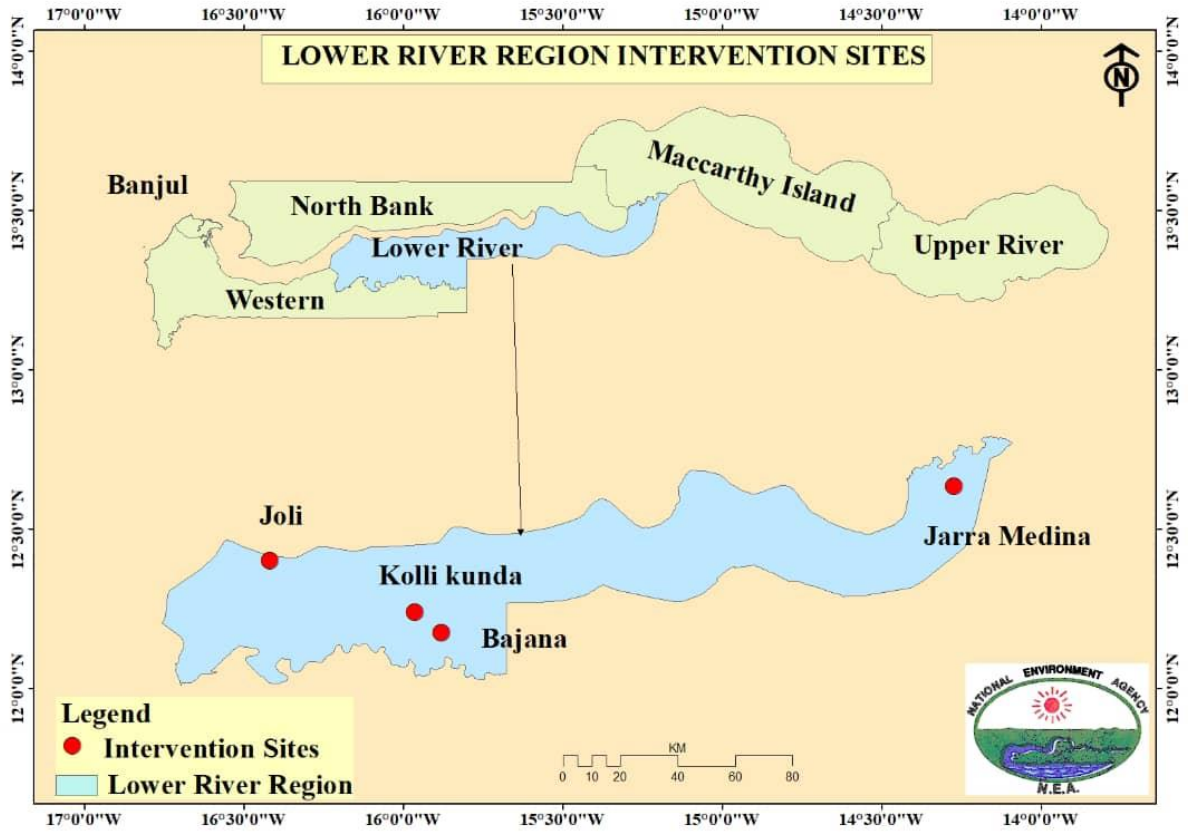

Figure 1: Regional map showing project sites in LRR

3.5.1 Site location and description

As noted in 2.3 above, LRR is the second largest region in The Gambia by land size, covering a total area of 1618 km^2 and divided into 6 administrative districts viz: Jarra East, Jarra Central, Jarra West, Kiang East, Kiang Central and Kiang West. The region is generally flat with few low hills. The main drainage features are the River Gambia and its two major tributaries:

Bintang Bilong and *Sofa Nyama Bolong*, which serve as a natural boundary between the region and WRC and CRR respectively.

The proposed project intervention communities, 4 in total, are situated in only 2 of the 6 administrative districts of the region. Baseline environmental and socioeconomic conditions prevailing at the sites are detailed in chapter 3. Table 5 on summary of community consultation, details the findings during the communities' consultation and this findings depicted the current realities in the communities.

The communities are all predominantly agrarian, with rice, groundnut and early millet being the predominant crops cultivated. Vegetable gardening, petty trading and fishing, are other livelihood activities the residents in the region are engaged in.

3.6 Stakeholder identification and engagement process

CSRWASHDP has a number of implementing partners. These partners have been identified by virtue of their relevance to the project taking into account their core mandates in the natural resources sector. As part of this SS-ESMP studies, a stakeholder analyses was carried out and the table below lists a number of institutions, interest in the project as well as possible roles in the project implementation.

Table 8: Stakeholder analysis of the key institutions

INSTITUTION	MANDATE	ROLE IN PROJECT IMPLEMENTATION	
		Implementation of mitigation measures	**monitoring**
National Environment Agency	The NEA is mandated Gambia government Agency for ensuring compliance of projects with national environmental management laws	Direct monitoring of the implementation of the enhancement and mitigation measures and submission of quarterly monitoring reports to PMU. To advise the PMU on required adjustments to the enhancement and mitigation programs.	Quarterly environmental monitoring with key stakeholders
Ministry of Environment, Climate Change and Natural Resources	This Ministry oversees Implementation of the Environment policies adopted by the National Environment Management Council (NEMC)	The Ministry co-opted in the monitoring to ensure adopted policies are in line with our national environmental laws	
Department of Water Resources	It is responsible for The assessment of Periodic variation of the country's water resources, their use and for water resources planning.	Direct monitoring of the implementation of enhancement of mitigation measures and also concerned with changes in the quality or contamination of surface and groundwater in project	Potential contributor towards cost of implementation of the ESMP since this is not project's responsibility

		intervention areas.	
Ministry of Fisheries and Water Resources and NAMs	Statutorily mandated Gambia government Institution responsible for The implementation of all water resources related projects	Overall coordination of the enhancement and mitigation and monitoring programs.	Direct reporting to donor on the state of the ESMP implementation and direct implementation of the enhancement and mitigation programs
Local Government Authorities	Regional authority within Whose administrative area the project falls and a potential supporter in both project and post project era	Potential contributor towards cost of implementation of plan since this is not project's responsibility	
Director of Public Health Services	Project has implication on public health issues	Potential contributor towards cost of implementation of plan since this is not project's responsibility	Key stakeholder in the monitoring of controlling public health issues
Beneficiaries Communities	communities to receive Project support in water supply and public sanitary facilities	in-kind contributions, especially free labour towards plan implementation Record keeping to aid monitoring program	Provide relevant information during project monitoring
Non-governmental Organizations:	Those organizations working with beneficiary communities in the area of food self- sufficiency, poverty alleviation of portable water for local communities	**1**.share and provide expertise in the implementation of the mitigation and monitoring programs **2.** Share expertise/experience and resources in building capacity of the beneficiaries	

CHAPTER 4. BASELINE ASSESSMENT

4.1 Description of the environmental and social components within the project area

Topography and drainage

Like the rest of the country, land is generally flat with the exception of few low hills. As noted in the previous chapter, the main drainage features in the region are the River Gambia

and its main tributaries: *Bintang bolong* and *Sofa Nyama Bolong*, separating the region from WCR and CRR respectively.

Geology and soil

The Quaternary Period, a subdivision of Geological Time Scale, covers the last 2.6 million years up to the present day. During the preceding Tertiary and cent Quaternary periods, which are the two most recent in the 4.5-billion-year history of the world, River Gambia and its tributaries were formed. Throughout the Quaternary Period, a strong pattern of alternating wet and dry climates resulted in transgressions (rate of sea level rise exceeds rate of sediment deposition) and regressions (sea level decreases exposing sediments) of the sea into the River Gambia channel and the coastal beach.

The last major transgression occurred between 7.000 and 3.650 years ago, drowning the entire River Gambia. During this last major transgression, the sea level rose about 3 to 4 m. The Quaternary events described above resulted in sequences of unconsolidated sand, silts and clays within the valley carved by River Gambia and along the coastal beach. The entire Gambian landmass was then submerged under the sea, which explains the absence of hard igneous e.g. basalt, and metamorphic rocks today.

Soils in The Gambia is subjected to various types of degradation attributed to soil erosion (wind and water), clearing by burning and limited incorporation of green manure and salinization from the main river and its estuaries. The most predominant soils are ferruginous and feralitic highly weakened tropical soils characterized by low cation exchange capacity, low inherent fertility, and strong consistencies and poorly developed structures and medium to high base saturation which cut across the regions, including the Upper River Region.

Climate and weather condition

Located at an elevation of 34.93 meters (114.6 feet) above sea level, Lower River has a Tropical wet and dry or savanna climate (Classification: Aw). The city's yearly temperature is 29.94ºC (85.89ºF) and it is 0.36% higher than The Gambia's averages. Lower River typically receives about 77.24 millimeters (3.04 inches) of precipitation and has 82.46 rainy days (22.59% of the time) annually.

In LRR, relative humidity is generally moderate, becoming higher during the rainy season. Temperatures are highest in the year at 38.4 degrees Celsius in April. The chart below shows the mean monthly temperature and precipitation of in Lower River Region in recent years[4].

Table 9:The mean monthly temperature and precipitation of LRR

April	**31.37°C | 88.47°F**
May	31.07°C | 87.93°F
November	30.77°C | 87.39°F
October	30.76°C | 87.37°F
June	30.72°C | 87.3°F
March	30.71°C | 87.28°F

[4] Central River, The Gambia Climate (Accessed May 14th 2023. https://tcktcktck.org/the-gambia/central-river#t4

July	29.77°C | 85.59°F
February	29.32°C | 84.78°F
December	28.88°C | 83.98°F
September	28.87°C | 83.97°F
August	28.65°C | 83.57°F
January	28.38°C | 83.08°F

LRR has a tropical savanna climate. It is warm every month with both a wet and dry season. The average annual temperature for LRR is 28.48 degrees Celsius, with about 82.46 days of rain in a year. It is dry for 282.54 days a year with humidity of 48.22% and a UV index of 7.

Air quality

Like the rest of the country, there is barely any industrial activity taking place in the LRR. The region is predominantly agricultural, which mainly subsistence base rather than mechanized. The air quality in the region is mainly influence by the prevailing weather condition. In the dry season, when the landscape is bare, as the vegetation cover would normally be cleared by the frequent bush fires and/or grazing by animals (domestic and wild), the winds can easily blow away the topsoil, which affects the air quality. In the rainy season, this is considerably reduced due to the wet condition that prevails.

Water quality

Like the rest of the rural areas in The Gambia, the main sources of drinking water in LRR are open wells and boreholes. Like NBR and WCR, waters of River Gambia around LRR are salty and therefore not drinkable. Thus, the communities rely entirely on wells and boreholes as their only sources of water.

At the time of this study, literature on water quality specific to this region has not been found. However, as part of the baseline, water samples were collected and sent to DWR Laboratory for analysis. This result indicated accepted quality in accordance with both national and WHO standards.

Ambient noise

As with air quality above, the absence of industrial activity in the region makes ambient noise a negligible factor in this assessment. As noted under air quality, the major factor for noise is the region is the seasonal agricultural activities. While rice growing is both mechanized and use of traditional farming tools, the noise level is very minimal and restricted to the immediate environments, which for the most intervention sites, is far from home settings and largely limited to daytime only.

The biological environment

Flora

LRR is the region with largest forest in The Gambia. This has to do with sparse nature of the population in the region as compare to other regions. Kiang West National Park, under the administration of DPWM, is the largest nature park covering large swathe of land. The vegetation is characterized by tall trees, shrubs and grasses that serve as a habitat for wild animals and fodder for domestic animals.

Fauna

Due to years of deforestation in The Gambia, the wildlife population has dwindled. Despite its relatively good forest cover, LRR faced the perennial challenge of bush fires that impact the fauna. The forest, continued to serve as a habitat for what remains of the wildlife; the perennial practice of bush fires remains the single biggest threat to the fauna population in the region.

Socioeconomic environment

Demography

According to 2013[5] census, LRR had a population of 82,361 with a population density of 051. The total number of households was 8,474 as of 2003. As of 2003, the total area of the region is 1618 km^2. The infant mortality rate was 96 for every thousand births and the under-five mortality was 137 per every thousand births. The poverty gap ratio was 19.8 per cent as of 2003. The literacy rate of the province was 69.3 compared to a national average of 62.9 per cen.

Main economic activities

The major economic activity in the Upper River Region is agriculture, dominated by subsistence farming. The main cash crop of The Gambia, Ground, is the crop mostly produced in this region. There is also rice and early millet produced in the region. In addition to these, petty trading is another major economic activity, which mostly takes in the weekly market that take place in identified towns. Vegetable production also takes place with mainly women dominating it.

Governance

Per the Local Government Act, 2002 particularly as it relates to devolution of powers from the center to the regions, the LGA have been created to serve as the decentralized authority for both political and administration issues in their respective regions. The Lower River Region is divided into 6 districts, namely: Jarra East, Jarra Central, Jarra West, Kiang East, Kiang Central and Kiang West. All of these districts fall under a single LGA, which has its headquarter in Mansakonko.

Administratively, the Governor is the political head of the region (the governor`s administration covers the entire region. However, LGA is head by an elected Chairperson. Along with Chairpersons, there are also elected Councilors representing the various Wards in the LGA for a four year term. The Councillors with the Chairpersons constitute the legislative body at the decentralized level and are responsible for decision making on matters affecting the development needs of the people of the LGA. The decision of the Councils made by the Councillors in session, are implemented by the technical officers of the Council, either appointed directly by the Council or by the Central government.

Councils are tasked, in accordance with the provisions of the Local Government Act, cited above, with the responsibility to steer the development affairs of the LGA. This is done through rates, taxes and levies collected by the Council, 60% of which must be ploughed back in the form of development to attend to the needs of the residents of the LGA.

The district under the LGA is headed administratively by the Chief (saifo), a traditional authority based on the customs and tradition of a people. The Chiefs are responsible for

[5] Gambia Bureau of Statistics, Population and Housing Census Preliminary results, 2013

implementation of Councils and central government directives at the district level. The district Chief is supported by the heads of respective villages under his/her district. In the case of the proposed project intervention sites, the village chiefs (Alkalos) represent this authority.

The Governor, Saifos and Alkalos, in addition to their administrative functions, also have quasi-judicial functions. The Governor supervises the District Tribunals, whilst the Saifos serves as the head of the District Tribunal in his/her district. These tribunals operates on customary law, which is premised on customs and traditions operating in their respective districts. The Alkalos, also presides over matters arising at the village level, which if not resolved, can be heard at the District Tribunal level.

4.2 Methodology and data collection techniques used for the baseline assessment

This report is prepared in accordance with the approved *Terms of Reference* approved by the Bank, which in in line with the procedures and guidelines by the national regulatory Agency. Accordingly, the following steps were followed in collecting information needed by the development of this SS-ESMP:

- ***Data gathering;*** The Consultant assembled and evaluated relevant baseline data relating to the biophysical and socio-economic environment to be influenced by the project. The baseline data include climate, topography and relief, geology and soil, vegetation, demography, access to basic services and socio-economic conditions. In addition, this report has scoped out the issues and provided general assessment of the impacts.

- ***Stakeholder identification and consultations;*** among the relevant stakeholders are the central government institution affected by the proposed project activities namely: DWR, NEA, DPWM, DCD, DOF, DOA and MoH. In addition, the LGA at the decentralized level as well as the project beneficiary communities were also identified and engaged.

- ***Collation and analysis of data;*** this took into account the relevant project documents namely: Project Appraisal report, ESMF and the generic ESMP. Also reviewed are the relevant national policies and legislation, as well as the AfDB reference documents.

The rationale for the SS-ESMP to ensure that the project is environmentally and socially sound, which implies that no undue harm will be caused to the communities, whilst efforts are being made to improve their lives and livelihoods by the project. This report therefore, describes and quantifies the potential/anticipated impacts of the proposed project activities on the biophysical environment and the beneficiary and neighbouring populations before, during the project implementation cycle, and post implementation. The report also proposed mitigation measures for any negative impacts identified as well as enhancement measures for the positives ones, as outlined in the environmental and social management and monitoring plan developed covering each phase of the project cycle. The following strategies were adopted to achieve the objectives of the Environmental & Social Impact Assessment:

- Detailed assessments of the state of the environment in the project location

- Evaluation and prediction of positive and negative environmental and social impacts associated with the project
- proposition of mitigation measures to address adverse environmental and social impacts, and
- Develop an Environmental and Social Management Plan (ESMP)

As well as the strategy alluded to above, the methodological approach to preparing this SSEMP included a desk review of AfDB Requirements, Environmental and Social Standards, Environmental Health and Safety Guidelines, National Policies, institutional, legislative and regulatory frameworks, the relevant international conventions, etc as they are applicable to this project. Institutional and community consultations/engagements were also held across all 55 intervention sites and 5 administrative regions the project is being implemented.

Communities engaged was undertaken as part of the baseline, which relied primarily on Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) in the communities. The feedbacks from the desk-review and the baseline information reviewed, have been analysed and put together to prepare this ESMP. Below is a detailed description of the different methodological approaches used for this assignment:

4.2.1. Data Collection

For this assignment, two forms of data were used for the assessment: desk review and community consultations through site visits involving FGDs, and KIIs. These are very important for impact assessment.

4.2.2. Desk review/secondary data collection

Relevant project documents and reports were carefully looked at for in-depth knowledge and understanding of the project and gather important biophysical and socio-economic information about the site. Some of these vital documents included the Project appraisal report, the project ESMF and generic ESMP, quarterly monitoring reports of the previous year as well as similar reports developed on similar projects implemented in the country. The Gambia Feasibility Study Report on the Vulnerable Youth and Women Support Project

4.2.3. Primary Data Collection

This was required for the baseline information and communities' consultation. To gather data from stakeholders on project environment and socio-cultural and economic impacts, the following data collection activities were carried out: Focus Group Discussion (FGDs); and Key Informant Interviews (KIIs). The discussions targeted mainly the water committees and members of the Village Development Committees (VDCs) of the various intervention communities. These groups comprised of the youth, elderly and women in relation to their perception on the potential impacts of the proposed project works.

4.2.4. Data Collection Tools

A checklist was designed and used to collect information from respondents regarding the project activities and their environmental and social impacts. This checklist guided the processes of FGD and KII.

4.2.5. Fieldwork

The consultant team conducted observation and consultative visits to the selected sites to gather information on the environmental baseline and status of the sites. During the said field visit, the consultant team ensured that both set of targeted people for the FGD and KIIs were engaged separately with the aid of the questionnaires and guides developed.

4.2.6. Quality Control

To avoid bias and related issues that has potential to compromise standard, the field mission was undertaken by members of the EIA Working Group. This mission is guided by the questionnaires and guide alluded to above. This group comprised of experienced individuals with a remarkable track record for assessment. The information generated is objectively analysed without dilution of fact as this team is expected to be at the validation of this report upon completion.

4.3 Findings of the baseline assessment, including environmental and social risks and opportunities

As part of the baseline, all 14 beneficiary communities were visited. The table below contain the summary of comments and observations from the community consultation.

Table 10: Summary of the community consultations in LRR

Community	District	Summary of Findings
Madina	Jarra East	• The issue of potable water remains a challenge both for human and domestic use (livestock) • At present the women of the village spend a considerable part of their time on trying to fetch water from the existing open wells that often dry up. • The community is willing to participate in project related works. Some form of skill labour and unskilled labour is available in the areas of carpentry and masonry. • The community is eager for works to start so their sufferings could be alleviated. • The community will accommodate migrant labour but the project should give preference to members of the community first for related works. • The land for the proposed project has been voluntarily given by the previous owner through consensus reached among community members themselves. • No issues of gender-based violence is expected as community members will closely monitor. More so, the community expect that vast majority of workers will be recruited from the community during construction works. • Availability of water will reduce drudgery especially on women.
Bajana	Kiang West	• The community is concerned with the late implementation of

		the project. ● There are fewer open wells in the community, which are inadequate to meet the water needs of people and their livestock. ● A member of the family that donated the land for the proposed project was displeased by the late start of work and therefore brought compost to the land in preparation for the upcoming rainy season. ● Community members argued that land was acquired with common agreement of all family members. The individual that brought compost to the site and threatened to grow crop on site will be engaged through his elders. ● The youth of the community are willing to partake in project works and the community wants them to be prioritized for employment opportunities. ● They have provided their community participation, started saving for sustainability plan and now left with the project to fulfil it promised. ● However, there are concerns that any further delay in implementation could cause difficulties in collecting monies and fulfilling annual commitment for sustainability
Koli Kunda	Kinag West	● Water needs are immense with fewer opened wells in the communities not enough to take care of the water needs of the community members and their livestock. ● Community members will be ready to provide both skilled and unskilled labour. ● Community members are not averse to having migrant labour however, they will prefer their own people to be given the priority. ● They have able-bodied men and women who are ready to participate in the next phase of the project ● However, the community members have lost faith because the project has taken too long to be implemented. ● They have provided their community participation, started saving for sustainability plan and now left with the project to fulfil it promised. ● They are concern about water reaching all the drawing points due to improper networking. ● Further delays in implementation could cause difficulties in collecting monies from the community members in fulfilling annual commitment for sustainability enhancement,
Joli	Kinag West	● There are only two existing open wells in the community people rely on for their daily water needs. These wells are at a minim depth of 45 to 50 meters. ● Sometimes, when the wells dried up, which is so often in the dry season, community members use their donkeys and horses to go and look for water in They have some skills workers in carpentering and mason.

		• There is work force in the community that can be engaged during project work. • The project could also invite migrant workers for skilled work not available in the community. • Community financial contribution is ongoing and this will ensure that there is sustainability once the project is handed over. • Delay in implementation could cause difficulties in ensuring continued contribution and people are beginning to lose hope. • ,the issue of gender based violence and sexual exploitation is deeply frowned upon; however, the community members do not think this act will occur due to the project related activities.

CHAPTER 5: ENVIRONMENTAL AND SOCIAL IMPACTS

To identify and assess potential impacts associated with or anticipated to result from the proposed project activities, the ESIA team used data collected from field consultations, professional judgment, and desk analysis to identify potential impacts and their interactions. The significance of potential impacts that may result from the proposed Project activities was determined to assist in preparing recommendations for the proposed Project evaluation.

5.1 Identification and assessment of potential environmental and social impacts associated with project activities

The planned works anticipated impacts have been predicted and evaluated using standard methods of impacts identification. Approaches such as checklists and matrices to identify the main sources for potential impacts from the proposed activities were used. Public consultations are a key indicator for this process, as consultations were held in all the beneficiary communities to sound the opinions of the people with regards to the project works. The views gathered during this consultative process have been incorporated in the preparation of this report. The identified impacts are categorized into **positive** and **negative** impacts that will arise from the planned works implementation processes.

The overall planned activities are considered to be positive for both the socio-economic and biophysical environments observed in all the communities visited. No cumulative impacts are foreseen, and the negative impacts associated with occupational health and safety mainly during pipe laying, and wastage of water during operational phases, are easily mitigated with measures identified in this report as outlined in **Chapter 6**.

The direct positive impacts

The direct positive impacts of the planned work activities will include:

(i) Reduction in Co2 emissions

The systems will be entirely powered using solar energy as opposed to the conventional diesel generators used in the Gambia. This will ensure the carbon footprint of the proposed work is significantly minimal.

(ii) **Improved community health and wellbeing:**

- Improved water supply for the communities will invariably improve their health condition in terms of having clean water for domestic usage (drinking and laundry)
- Reduce drudgery, social tension and conflict among communities resulting from water shortages for humans and livestock and thus income for owners.
- Reduction in time spent in fetching water

(iii) Enhanced livestock production

- Clean water for the livestock will ensure that animals` health will be improved thereby enhancing productivity and possibly multiplicity
- Providing cattle drinking troughs in project sites will reduce the time cattle herders spend walking for kilometer in search of drinking points which ultimately improves security for the animals

(iv) Enhance socio-cultural functions/religious rites

Water is an essential element for purification thus needed by worshippers to cleanse themselves prior to performing religious rites. The proposed project will

provide water points in worship centers in all the communities which will enhance access to potable water to fulfill religious functions.

(v) **Employment Opportunities**:
Employment opportunities will arise due to increased recruitment of local labour (both skilled and unskilled) during the execution of the planned work activities. This will provide additional sources of income for locals and improve livelihood.

(vi) Promotion of trade and commerce
The proposed work activities will largely depend on use of construction of materials such as laterite and sand. It is anticipated that contractors will depend on locals for the supply of these materials which will promote trade and commerce in the communities. In addition, the planned work activities will potentially promote petty trading at construction sites.

(vii) **Community empowerment**:
The proposed work activities will ultimately community members to skills and knowledge that will enhance their capacities to undertake similar venture in the future. Similarly, the water management committees in the communities will be trained on Operation and Maintenance strategies for the sustainability of the systems.

(viii) **Capacity building of Stakeholders:**
The capacity of the key stakeholders including contractors, consultant, Project Implanting Partners (PIPs) will be enhanced through training

The direct negative impacts
The planned work activities are likely to generate negative impacts during implementation. These negative impacts will stem from the following: (i) construction works related to digging of trenches to lay the pipe networks (ii) influx of migrant workers into the communities and the potential risk of social tension, both of which happens at the construction phase.

The operational phase of the project is also likely to cause some negative impacts such as contamination of water source arising from proximity of the boreholes in some of the areas to farming activities or proximity to sanitary facilities in in other sites. These concerns are detailed under the following specific sub-heads:

i. **Destruction of vegetation**:
Although all the borehole sites have very little vegetation cover, as the sites have been utilized for agricultural and related purposes for many years, the planned work activities may result in some impact on the vegetation cover. For instance, at some of the sites, pruning of nearby tree branches will be necessary to allow for sufficient radiation to generate solar energy.
In addition, shrubs within the boreholes` premises will have to be regularly removed to prevent the areas from becoming bushy.

ii. **Increase in soil erosion/runoff:**
The use of heavy trucks by contractors during trenching within the project area is likely to lead to compaction of the soil structure which may lead to reduced soil infiltration capacities and subsequently resulting in increased run-off. The increased run-off may lead to soil erosion, which could potentially lead to gully formation, affect soil-water balance and the general hydrological cycle among other impacts.

iii. **Increase in Ponding and water borne diseases:**
In addition, quarrying for construction materials such as gravel and sand during tank construction, could potentially result in destruction of landscape and as well as trigger for soil erosion. The quarrying sites potentially could be areas for pounding water and, if too close to residential areas, they could be good breeding grounds for mosquitoes and other water-borne pathogens.

iv. **Pollution; Dust, water, noise and Air Quality Concerns:**

Excavation and transportation of construction materials from source to the construction sites, could trigger dust pollution and generally compromise air quality for the duration of work. In addition, excavation during trenching, could also be a potential source of dust emission. Whilst much of the dust related impacts are anticipated to immediately impact construction workers, the residents of communities on the roads leading to sites where construction materials are sourced, could also be negatively impacted too.

Construction vehicles and other machinery to be used during planned works activities could emit toxic fumes from their engines leading to air pollution. The dust and the fumes when inhaled could lead to adverse effects to residents, especially to young children and people with underlying health conditions. Oils spills and grease from the construction vehicles and machinery have the potential to pollute soil, water sources and the vegetation.

Noise pollution emanating from movement of vehicles, other machinery and workers could have destabilizing effect not only on humans but animals as well.

v. **Encroachment into and possible contamination of water source:**
Vast majority of the sites where the facilities are used to be agricultural lands acquired from their owners. The sites mainly in West Coast Region are close to residential areas with toilet facilities or a potential for those facilities to be built in the near future. Whilst proximity of agricultural practices near the facilities in other regions makes it possible for the water sources to be contaminated by agrochemicals overtime, the rapid urbanization in the West Coast Region makes it possibilities for sanitary facilities to be built near the water sources and the subsequent contamination overtime.

vi. **Generation of wastes:** The generation of solid wastes resulting from the implementation of the work activities. This could result from waste generated from construction materials and through petty trading activities

vii. **Possible accidents and occupational hazards*:*** - Implementation of the planned work activities will possibly increase volume of human and motor traffic in the project sites.

The increase in human and motor traffic will be aggravated by the transportation of construction materials, water pipes and other equipment required in constructing the facilities. This is likely to result in a higher risk of accidents and occupational hazards occurring in the area of operation. Factors that may exacerbate this situation are inadequate appropriate personal protective equipment for program workers including the helmets, overalls, boots and gloves.

viii. **Disruption of free movement:** *The trenching of* pipes, would potentially pass through streets and might lead to temporary blocking of the areas within the communities and between communities in clustered communities. People and livestock` free movement could be disturbed over the short term thus affecting their wellbeing momentarily.

ix. **Transmission of STIs and other communicable diseases:** The prevalence of Sexually Transmitted Infections in the area could increase due to free-flow and high influx of migrant workers particularly during the implementation of planned work activities. The influx of people into the project areas may potentially result in increased spread of diseases, particularly HIV/AIDS.

In addition, water and vector borne diseases are commonly associated with stagnant water that may arise at water points if not properly managed by the benefitting communities. The diseases associated with stagnant water are malaria, bilharzia (schistosomiasis) and river blindness (onchocerciasis), whose vectors proliferate in the non-moving waters.

Table 11: Summary of the potential Impacts

Impact issue	Potential Impact	Project Phase
Environmental		
Reduction in Co2 emissions	Less Co2 emission due to the fact that the system will be solar powered instead of connecting to the grid	Operational
Social		

Improved community health and wellbeing	▪ Access to potable drinking water ▪ Reduction in the incidence of water borne diseases ▪ Reduction in drudgery amongst women and girls ▪ Reduction in time spent in fetching water	Operational
Enhanced livestock production	▪ Provision of drinking troughs for animals ▪ Reduction of time in search for drinking points ▪ Reduced security risk in search for drinking points	Operational
Enhance socio-cultural functions/religious rites	Provision of water for purification/ablution	Operation
Employment creation	Communities to be paid through skilled/unskilled labour	Construction
Promotion of trade and commerce	▪ Procurement of construction materials within the communities ▪ Petty trading around the construction sites ▪ Income through rent	Construction
Community empowerment	Knowledge and skill transfer	Construction
Negative		
Environmental		
Destruction of vegetation cover	Cutting down of trees or pruning of branches	Construction
Increase in ponding	▪ Extraction of construction material from quarries ▪ Waste water within the tap area ▪ Burst pipes	Construction & Operational
Increase in soil erosion/runoff	▪ Destruction of the soil through the use of heavy equipment on site ▪ Improper backfilling and compaction of trenches ▪ Change in land use	Construction
Increase in water-borne diseases	▪ Waste water discharge points serves as breeding ground for mosquitoes and disease carrying pathogens	Operational
Dust and Noise pollution	▪ Excavation and transportation of construction materials ▪ Trench digging using heavy equipment ▪ Use of heavy construction equipment	Construction
Social		
Triggering of Social tension between beneficiaries	▪ Sharing of water supply systems amongst communities	Construction & Operational

Triggering of Social tension between beneficiaries and Migrant workers	▪ Prioritization of migrant workers over locals ▪ Anti-social behaviours e.g. drinking of Alcohol, misconduct etc.	Construction
Increase in the incidence of GBV/SEA/SH	▪ Influx of migrant workers ▪ Water points remotely located ▪ The use of minors to fetch water in remote locations ▪ Women partaking in construction activities	Construction & Operational
Public Health	▪ Transmission of Sexually Transmitted Infections (STIs) ▪ Exposure to dust and toxic fumes ▪ Transmission of communicable diseases e.g. Covid, TB etc.	Construction
Occupational health and safety		
Increase in accidents	▪ Injuries to workers due to not wearing of PPEs during the construction phase ▪ Individual and animals falling into trenches	Construction

5.2 Assessment of the significance and magnitude of identified impacts

5.2.1. Impact Identification

The description of the planned project activities helped in identifying the environmental aspects of the proposed project. These identified environmental aspects will be matched with the existing baseline description of the project environment, which was employed to generate a checklist of potential and related impacts of the proposed project. Project impacts are identified by understanding the interaction between the planned project activities and the prevailing environment at the project sites. Expert knowledge and stakeholder consultation also play a significant role in impact identification.

5.2.2. Impact Characterization

The potential impacts identified from the project's proposed activities were further characterized to have an in-depth understanding of the nature of the identified potential project impacts. The characterization was based on the nature, characteristics, and duration of the different project activities on the physio-chemical and biological components of the environment as well as the socio-economic, cultural, human health, and safety.

Project impact on the environment occurs when the existing environment interacts with the various project activities, which may lead to environmental changes, as shown in ***Equation 1***.

[Environment] + [Project] = {Changed Environment} **eq (1)**

As presented below, the changed environments anticipated from the above interaction were direct or indirect, adverse or beneficial, cumulative or residual, and long-term or short-term.

Positive/Beneficial Impacts: Impacts that would produce an overall positive effect on the well-being of the people as well as the environment.

Adverse Impacts: Impacts that may result in;

- Irreversible and undesirable change(s) in the biophysical environment,
- Decrease in the quality of the biophysical environment,
- Limitation, restriction, or denial of access to or use of any component of the environment to others, including future generations,
- Disturbance to the social cohesion and stability, as well as the wellbeing of the people,
- Sacrifice of long-term environment viability or integrity for short-term economic goals.

Direct Impacts: Impacts resulting directly (direct cause-effect consequence) from project activity.

Indirect Impacts: Impacts that are at least one step removed from project activity. They do not follow directly from project activity.

Normal Impacts: Impacts are normally expected to follow a particular project activity.

Abnormal Impacts: An impact is considered abnormal when it follows a project activity against sound predictions based on experience.

Short-term Impacts: Impacts that will last only within the period of specific project activity.

Long-term Impacts: Impacts whose effects remain even after a specific project activity.

Reversible Impacts: Impacts whose effects can be addressed by applying adequate mitigation measures.

Irreversible Impacts: Impacts whose effects are such that the project (impacted component) cannot be returned to its original state even after adequate mitigation measures are applied.

Cumulative Impacts: Impacts resulting from an interaction between ongoing project and other activities occur simultaneously.

Incremental Impacts: Impacts that progress with time or as the project activity proceeds.

Residual Impacts: Impacts that would remain after mitigation measures have been applied.

5.2.3. Impact Evaluation

The already identified and characterized potential impacts in the previous stages of the assessment process will be evaluated based on explicitly defined criteria to ascertain the significance of the impacts. The criteria and weighing scale adopted for the evaluation are provided below.

Legal/Regulatory Requirement (L)

The proposed project activities that trigger the identified impacts were weighted against existing legal/regulatory provisions to determine the requirement or otherwise for permits before the execution of such activities. The following rating scale was used:

Table 12:Impact Rating Matrix

Condition	Rating

No legal/regulatory requirement for carrying out project activity	Low = 1
Legal/regulatory requirements exist for carrying out an activity	Medium = 3
A permit is required before carrying out project activity which may result in an impact on the environment.	High = 5

5.3 Climate change considerations and potential impacts

Climate variability and change are increasingly posing a threat to The Gambia's socio-economic development and environment. Since the 1970's, observations indicate significant changes in the region's climate, particularly in relation to temperature and precipitation. The high dependence of The Gambia on its natural resources makes it vulnerable to climate change impacts such as rises in temperature, changes in annual rainfall, more frequent and intense rainfall events, and sea level rise. Pre-Existing physical, ecological, and socio-economic characteristics and stressors increase the country's vulnerability to extreme events such as storms, flooding, and drought, which are anticipated to become more frequent and intense due to climate change.

Climate hazards in The Gambia include torrential rainfall, storms (and flooding), drought, cold spells, intra-seasonal-drought, heat waves, sea level rise, and unseasonal rains. Related hazards include limited ability to predict the incidence of some hazards, and the concomitance of multiple and mutually reinforcing hazards. The most significant weather/climate-related hazards are river flooding, coastal flooding, and water scarcity.

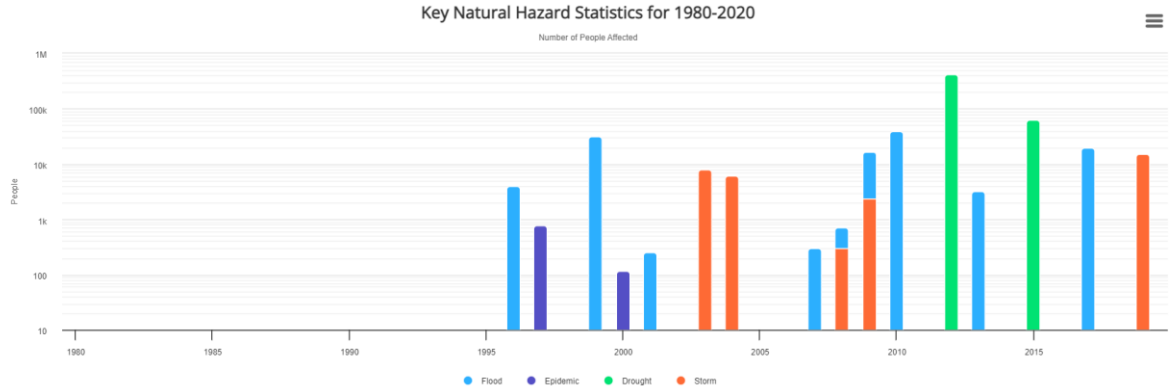

Figure 2: Key Natural Hazard statistics from FAO Gambia

CHAPTER 6: MITIGATION AND MANAGEMENT MEASURES

This chapter discusses the mitigation measures proposed with a view to ensuring that the works are carried out in an environmentally and socially sound manner.

6.1 Description of the hierarchy of mitigation measures (avoid, minimize, mitigate, and compensate)

Assessing Mitigation Measures

In developing mitigation measures, the first focus was on measures that will prevent or minimize impacts through the design and management of the Project rather than on reinstatement and compensation measures. A 'hierarchy' of mitigation measures for planned activities and unplanned events is outlined below:

1. *Avoid at Source; Reduce at Source:* avoiding or reducing at source through the design of the Project (e.g., avoiding by sitting or re-routing activity away from sensitive areas or reducing by restricting the working area or changing the time of the activity);
2. *Abate on Site:* add something to the design to abate the impact (e.g., pollution control equipment);
3. *Abate at Receptor:* if an impact cannot be abated on-site, then control measures can be implemented off-site (e.g., traffic measures)
4. *Repair or Remedy:* some impacts involve unavoidable damage to a resource (e.g., material storage areas) requiring repair, restoration, and reinstatement measures.
5. *Compensate in Kind;* Compensate through Other Means where other mitigation approaches are not possible or fully effective, then compensation for loss, damage and disturbance might be appropriate (e.g., financial compensation for degrading agricultural land and impacting crop yields). It is emphasized that compensation to individuals with residual impacts to livelihood or quality of life will generally be non-financial and will have a focus on restoring livelihoods.
6. *Control:* this aims to prevent an incident from happening or reduce the risk of it happening to as low as reasonably practicable by reducing the likelihood of the event (e.g., preventative maintenance regimes, traffic calming and speed limits, community road safety awareness training);
7. *Reducing the consequence* (e.g., Bunds to contain hazardous substance spills); and a combination of both of these; and
8. *Recovery/Remediation* includes contingency plans and response, e.g., Emergency Response Plans and Procedures.

6.1.1. Risk Assessment

The health, safety and environmental risks associated with the proposed project were assessed and ranked as "Low", "medium" or "high", using the Risk Assessment Matrix (RAM) as shown in ***Table 13.***

Table 13: Risk Assessment Matrix

			Likelihood				
			A	**B**	**C**	**D**	**E**
			Remote	**Unlikely**	**Possible**	**Likely**	**Certain**
	5	**Severe**	**M**	**H**	**H**	**H**	**H**

Negative Consequences	4	Major	M	M	H	H	H
	3	Moderate	L	M	M	M	H
	2	Minor	L	L	M	M	M
	1	Negligible	L	L	L	L	L
Positive impact (P)			P	P	P	P	P

The level of impact will be largely determined by a qualitative appraisal of the likely change in the receiving environment, human health/safety and socio-economic situation, based on the matrix in Table 7 and the weighting used was as follows:

- **Low Risk** : Where the level of risk is broadly acceptable and generic mitigation measures are already assumed in a design process but require continuous improvement.
- **Medium Risk** : Where the level of risk is tolerable, but mitigation measures are required to minimise the risk to reduce the risk as much as practicable (i.e. tolerable if ALARP).
- **High Risk** : Where the level of risk is not acceptable and mitigation measures are required to move the risk figure to the lower risk categories.
    - Positive impacts (to be enhanced if at all practicable).

Risks Assessment

The planned work activities, like any other development works, are anticipated to bring about changes in the economic, social and environmental aspects in the intervention communities. Development works are generally anticipated to bring about positive changes; however, if the requisite care is not taken, they also result in adverse effects, even if such may not be intended. There is therefore a need to prevent the occurrences of unfavourable effects that may be associated with planned work activities so as to enhance the sustainability.

6.2 Specific mitigation measures for each identified impact, including technological, operational, and management approaches

Destruction of vegetation cover

Although this aspect is not prevalent in all the sites as the area identified have previously been used for agricultural purposes, its significance cannot be understated. cutting down of trees should be minimized as much as possible. the few sites that have trees close to the facility, pruning of the branches should compensate for the removal of the entire trunk. It is also essential to compensate for the loss by ensuring planting of more trees elsewhere in the communities. The communities should be capacitated to lead the initiative to plant more trees.

Increase in ponding
As noted, this is a determinant for growth of water borne pathogens. The project intervention cannot be a recipe for spreading of diseases in the communities. Therefore, there is a great need for sensitisation of the communities on water conservation techniques. this will be achieved through establishment and training of water management committees in the various communities, who will take charge of managing the water supply infrastructure.

In addition, communities should be encouraged to formulate by-laws to be used to ensure compliance to the set rules for the sustainable management of the water supply infrastructure.

Increase in soil erosion/runoff
Erosion triggered by runoff will result in further degradation of the landscape. To avoid this scenario, all trenches dug during pipe laying should be properly refilled/backfilled and compacted. In addition, the vehicular traction should be limited to already existing roads in order to avoid further loosening of the soil and subsequent removal by runoffs.

Increase in water-borne diseases
As noted under increase in ponding of water above, this anticipated impact is linked to wastage of water at the operational phase of the project. To minimize this impact, the need for water communities to be set up in communities and giving requisite capacity building to undertake their functions, is necessary for the sustainability of the water supply infrastructure.

Dust and Noise pollution
To minimize this impact, dust and noise suppressant measures should be instituted. these measures include but not limited to ensuring that use of heavy machinery is limited to day time only to minimize disturbance whilst people are expected to be resting, sprinkle water in workplaces before start of work, provide requisite PPEs to workers and ensuring that they used at work sites during work, limit the use of heavy equipment to the outskirt of the settlements, ensuring that trucks transporting construction materials from quarrying sites to works areas to be covered and their drivers observe speed limits when entering the communities.

Triggering of Social tension between beneficiaries
In light the uniqueness of customs and values in the communities, the best approach to dealing with communal tension is to make use of the existing traditional structures such as councils of elders in communities. The structure should be the first point of call-in times of conflict between two communities in case of clustered communities as well as conflict among members of the same community in case of a facility serving a single community. matters that cannot be resolved at community level should be resolved through the traditional referral mechanism up to the level of the regional governor. In the same vein. the GRM mechanism should be established and provided with requisite resources to function effectively. Part of the capacity strengthening of the GRM mechanism is to make sure that its members have the needed training in relation to their work.

Triggering of Social tension between beneficiaries and Migrant workers
The influx of migrant workers during work is inevitable. Some of the anticipated works are so specialized that the required skills and expertise may not be available in the communities. However, this could be a recipe for communal tension especially if migrant workers are insensitive to community values and social ethics. One way to minimize the chances of conflict

is to ensure that migrant workers undergo orientation on what is expected in times of best behaviour in accordance with community values.

Increase in the incidence of GBV/SEA/SH

There is a need for sensitization of the community members, the contractors and workers on GBV/SEA/SH before the start of work. This will ensure that all persons become aware and take measures to avoid the repercussions. There should be monitoring and reporting mechanisms put in place to detect and take action on incidence before they become widespread.

Table 14:Summary of the Impact Mitigation measures

Impact issue	Potential impacts	Mitigation measures	Responsibility
Environmental			
Destruction of vegetation cover	Cutting down of trees or pruning of branches	▪ Avoid shady areas for the installation of the solar panels.	PCU/Contractor

		▪ Prune branches of trees instead of cutting down the entire trucks ▪ Encourage communities to plant trees in compensation for those lost.	
Increase in ponding	Extraction of construction material from quarries	▪ Use existing quarrying sites for supply of construction materials. ▪ Where new quarrying sites will be required, ensure that due process is followed.	PCU. Contractor/ communities
	Waste water within the tap area	▪ Construct waste water containment chambers at each time to avoid uncontrolled spillage of waste water. ▪ Sensitize communities on water conservation. ▪ Encourage formulation of communities' water management committees. ▪ Raise tap stands high to prevent access by children, which may result in wastage of water	
	Burst pipes	Ensure that pipes to be procured for the water networks are pressure-tested and proven to be guaranteed for the purpose	
Increase in soil erosion/runoff	Destruction of the soil through the use of heavy equipment on site	Limit the use of heavy machinery on existing roads to limit soil disturbances	PCU/contractor

	Improper backfilling and compaction of	Ensure that all trenches dug are properly backfilled and compacted upon completion of pipe laying**.**	
	Trenches	All trenches dug as either as part of pipe laying or through sourcing of construction materials, are properly buried or compacted.	
	Change in land use	Ensure that the perimeters of the boreholes are fenced to prevent incomparable activities within close proximity	
Increase in water-borne diseases	Waste water discharge points serves as breeding ground for mosquitoes and disease carrying pathogens	▪ Limit wastage of water by formulating communities' water management committees. ▪ Conduct sensitization of the communities on water conservation measures. ▪ Conduct sensitization of the communities on water borne diseases.	PCU/NEA/MOH/DCD
Dust and Noise pollution	Excavation and transportation of construction materials	▪ Ensure that trucks use in transportation of construction materials are covered to minimize dust emission. ▪ Trucks transporting construction materials should be made to observe speed limit.	PCU/ Contractor
	Trench digging using heavy equipment	▪ Minimize usage of heavy machinery in digging of tranches to the outskirt of communities.	

		▪ Sprinkle the ground with water to minimize dust emission	
	Use of heavy construction equipment	Limit the usage of heavy construction materials to day lime only.	
Social			
Triggering of Social tension between beneficiaries	Sharing of water supply systems amongst communities	▪ Traditional structures in the communities should utilized to resolve any conflict. ▪ The communities should be adequately sensitize on their roles and responsibilities in relation to sustainable upkeep of the facilities. ▪ A well-established GRM structure should be in place and adequately resourced to carry out its function	
Triggering of Social tension between beneficiaries and Migrant workers	Prioritization of migrant workers over locals	▪ Community members should be well sensitized on work requirements. ▪ Priorities should be given to hiring of local people based on competence.	
	Anti-social behaviours eg drinking of Alcohol, misconduct etc.	▪ Proper sensitization of the migrant workers on communities` norms, customs and conventions. ▪ A code of conduct should be prepared for each individual worker to sign before they could be engaged in project related works.	

Increase in the incidence of GBV/SEA/SH	Influx of migrant workers	▪ Proper sensitization of the migrant workers on communities` norms, customs and conventions. ▪ A code of conduct should be prepared for each individual worker to sign before they could be engaged in project related works.	
	Water points remotely located	▪ Ensure to locate taps in strategic areas ▪ Sensitize communities on GBV/SEA/SH	
	The use of minors to fetch water in remote locations	▪ Sensitize the communities on SEA/SH ▪ Monitor and report on cases on SEA/SH and child molestation	
	Women partaking in construction activities	▪ sensitize contractors, workers and communities on SEA/SH ▪ Ensure that contractors and each individual worker sign a code of conduct. ▪ Sensitization of the contractors/workers and communities and STIs/STDs	
Public Health	Transmission of Sexually Transmitted Infections (STIs)	Sensitization of the contractors/workers and communities and STIs/STDs	PCU/NEA/MOH
	Risk of respiratory infections due to exposure of dust and toxic fumes	▪ Ensure that workers are provided with adequate PPEs and ensure that they are used.	

		▪ Utilize dust suppressant measures including regular sprinkling of water	
	Transmission of communicable diseases eg Covid, Ebola, TB etc.	▪ Sensitization of communities, contractors and workers on communicable diseases and prevention measures ▪ Ensure health screening for workers.	
Occupational health and safety			
Increase in accidents	Injuries to workers due to not wearing of PPEs during the construction phase	▪ Ensure that workers are properly orientated on work procedures before start of work. ▪ Ensure that workers are provided with adequate PPEs and ensure that they are used.	PCU /Contractor
	Individual and animals falling into trenches	▪ Trenches dug on public roads should be refilled immediately after the pipes are laid in. ▪ Sealed off areas where trenches are dug with red ribbons to prevent persons falling in and causing injuries	

6.3 Integration of climate change adaptation and resilience measures

In integrating climate change and resilience measures, two key adaptation approaches usually looked into, which are either autonomous or planned. Autonomous adaptation is the reaction of, for example, a farmer to changing precipitation patterns, in that she/he changes crops or uses different harvest and planting/sowing dates. Planned adaptation measures are conscious policy options or response strategies, often multi-sectoral in nature, aimed at altering the adaptive capacity of the agricultural system or facilitating specific adaptations. For example, deliberate crops selection and distribution strategies across different agro- climatic zones, substitution of new crops for old ones and resource substitution induced by scarcity.

In that regard therefore, long-term adaptations are major structural changes to overcome adversity such as changes in land-use to maximize yield under new conditions; application of

new technologies; new land management techniques; and water-use efficiency related techniques.

Climate change adaptation for agricultural cropping systems requires a higher resilience against both excess of water (due to high intensity rainfall) and lack of water (due to extended drought periods). A key element to respond to both problems is soil organic matter, which improves and stabilizes the soil structure so that the soils can absorb higher amounts of water without causing surface run off, which could result in soil erosion.
Conservation agriculture and organic agriculture that combine with zero or low tillage and permanent soil cover are promising adaptation options for their ability to increase soil organic carbon, reduce mineral fertilizers use and reduce on-farm energy costs.

Trees and shrubs in farming systems (including agroforestry) can play a significant role in mitigating the impacts of extreme events and the resulting threats to food security. In addition to benefits such as the provision of wood and non-wood forest products, restoration of soil fertility, and the conservation of biological diversity, trees and forests improve the microclimate by buffering winds, regulating the water table, providing shade to crops and animals, and stabilizing coastal areas (for instance. through mangrove rehabilitation and afforestation). They thus contribute to sustainable agricultural production and food security.
The above measures are for an ideal agrarian environment with a crop production focus. These however can equally be suitable for water supply infrastructure for meeting the domestic water needs of communities.

CHAPTER 7: ENVIRONMENTAL AND SOCIAL MONITORING AND MANAGEMENT

7.1 Design of the monitoring and management framework for environmental and social aspects

The overall purpose of environmental and social monitoring is to ensure that mitigation measures are implemented and are effective. Environmental and social monitoring will also enable the response to new and developing issues of concern during the project implementation and, therefore, it will ensure that project activities comply with and adhere to environmental provisions and standard specifications of the Government of The Gambia and that of the African Development Bank.

The overall responsibility of environmental and social monitoring will lie with the Ministry of Fisheries and Water Resources through the Project Coordinating Unit (PCU) of the Department of Water Resources in close conjunction and collaboration with the National Environmental Agency – NEA (the responsible national authority on environment). The PCU recruited the environment and Safeguard Specialist who works closely with the NEA staff present at central and regional levels. Additionally, the NEA at the district level will provide environmental supervisory support.
However, most key staff involved in the implementation of the project may require on-site-training to enhance their understanding on various environmental aspects and reviews, including monitoring and compliance which will be helpful in handling environmental and social aspects of the project. The whole exercise of the SS-ESMP monitoring will involve monitoring compliance with regulations, managing worksites, executing specific environmental and social works, and seeking solutions to emerging environmental problems.
On-site monitoring of the ESMP will be the responsibility of the project E&S specialist in collaboration with NEA through the EIA Working Group in charge of oversight functions. Environmental compliance will be overseen by the regional environment officers in conjunction with relevant stakeholders responsible for environmental management. The ESMP monitoring team will ensure regular reporting, depending on the aspects being monitored to avoid any serious environmental and social consequences. Among the key issues to be monitored will be: (i) the status of the biological conditions; (ii) status of the physical works; (iii) the technical and environmental problems encountered; (iii) proposed solutions to the problems encountered; and, (v) the effectiveness of environmental and social measures adopted.

To ensure compliance, the proposed ESMP monitoring programme is at two-levels:

1) ***The supervisory activity carried out by the supervision missions of the AfDB***
   The supervisory or control missions are field as required by the AfDB and their role will include: (*a) reviewing the contractor's detailed responsibilities on ESMP and its specific procedures; (b) ascertaining assessment of the negative impacts identified; (c) ascertaining the effectiveness of proposed measures; (d) studying specific applicability conditions for the proposed measures; (e) monitoring the implementation of measures during the works implementation phase; (f) monitoring the recommended measures; (g) proposing remedies in the event of the occurrence of major impacts; and (h) conducting environmental compliance and assessment at the end of the project.*

Applying the environmental monitoring indicators adopted, the control mission will seek to measure the project's progress in a manner that highlights the various objectives in line with national laws and with the AfDB's Integrated Safeguards System (ISS).

2) The regular quarterly monitoring activities conducted by the PCU and NEA in collaboration with key government departments/EIA Working Group.

The regular monitoring will ensure that site activities are conducted in compliance with agreed local environmental standards under the laws of The Gambia.

7.2 Parameters to be monitored, monitoring methods, and frequency

The purpose of a monitoring program is to generally ensure that enhancement and mitigation measures are implemented as designed and scheduled. The program in this case is divided into two; **surveillance** and ***monitoring***, the former dealing with the continuous supervision of the *construction phase* to ensure that agreed measures are implemented while the latter deals with the quarterly monitoring during the implementation of the project. The program defines the responsibilities, frequency of monitoring, data collection methods.

7.2.1 Monitoring method

The measures recommended whether for enhancement or mitigation, all involve some form of physical intervention in the field. In this regard, a field visit is recommended as the primary form of monitoring and source of information. It is also recommended to consult records of similar projects implemented in similar conditions.

7.2.2 Frequency of monitoring

An effective surveillance will require the *Contractors to* supply work plans for the various construction works that should be shared with field offices mentioned in 6.2 above.

The surveillance team will conduct monthly field visit and as when required to ensure compliance of the contractors and enforce the recommendation of the EIA Working Group.

The quarter monitoring will be done by EIA Working Group, the frequency will be quarterly. However, experience from similar projects has shown that quarterly visits have worked well and is therefore recommended for the operations phase

Table 15: Parameters to be monitor, Schedules and Responsible institutions

No.	Parameters to be Monitored	Project Phase (construction, operational & maintenance	Location	Monitoring Indicators	Frequency of Monitoring	Institution/Agency to Monitor both internal and external
01	Air/noise pollution	Construction	Project sites	❖ Adherence to laid down legal and policy requirements ❖ Follow up on mitigation measures	Monthly and as a when required	MoFWR/PCU/ Contractor/consultant (s) and NEA/EIA Working Group
02	Water quality	Construction and operational phases	Project sites	❖ Should follow local and international standards/requirements ❖ Water quality supply, turbidity/ suspended solids; ❖ Number of areas with improved Sanitation condition	Monthly/annually	MoF&WR/PCU /NEA/ contractors/EIA Working group
03	Construction waste/debris	Construction	Project sites	❖ Construction debris should be properly disposed and at the right place according to the local laws/ regulations ❖ Pits should properly be backfilled to avoid water lodging ❖ Follow up on mitigation measures	Monthly	MoF&WR/PCU /NEA/ contractors/EIA Working group
04	Wild life habitat and forest cover	Construction and operational phases	Project site	❖ Adherence to laid down legal and policy requirements ❖ Follow up on mitigation measures	Monthly/quarterly	

7.3 Roles and responsibilities for monitoring and reporting

The responsibility for both surveillance and routine monitoring during the operations phase should be assigned to the existing Government framework for environmental monitoring that is EIA monitoring team and the NEA's *regional* network of Offices and that of Regional staff of Department of Water Resource (DWR). The EIA team comprises senior government technicians from stakeholder institutions at National Level. Therefore, the team may not be able to keep up with very frequent visits of surveillance; in this regard, it is suggested that surveillance be conducted by the NEA *Regional Offices* and the regional office of the DWR whilst the team takes charge of the monitoring.

7.4 Procedures for responding to non-compliance or unexpected environmental incidents

The main essence of monitoring, in this case, is to ascertain compliance in the implementation of the enhancement and mitigation measures defined for the potential impacts of the project. It is, therefore, necessary that a decision-making system is in place for ensuring monitoring recommendations. In most cases a special Environment Management Committee (EMC) will be set up for such decisions; we however recommend the current legal provisions be applied that give such powers to the Executive Director of the NEA.

7.5 Grievance Redress Mechanisms (GRM)

The CSRWASHDEP project like an infrastructural project has to deal with many stakeholders including beneficiary communities, contractors and other key stakeholders during the course of implementation. In as much as construction works are carried out, there is the tendency of misunderstanding between the actors on the ground and even between the project staff and the contractors or communities in the form of inappropriate actions such as gender-based violence in all its forms, and sexual offenses particularly on the side of women and girls, noise pollution among others.

Therefore, in order to ensure a smooth implementation of the project, a grievance redress mechanism framework is put in place to guide the project in the event of in eventualities, so that Project Affected Persons (PAPs) can have a means of making their voices heard and subsequently seek for redress. The CSRWASHDEP project intends to have the GRM committees in the three layers, i.e. the District Level-GRM Committee, the Regional-level GRM Committee and the Central -Level GRM committee in the order of hierarchy; with each of these layers with their respective roles clearly stipulated on the project's GRM Manual, which seeks to serve as the guiding principles to be adopted in cases of grievances.

Principles of CSRWASHDEP GRM

The CSRWASHDEP GRM principles seeks to avoid or even reduce risks to the bare-minimum resulting from the implementation of GRM, through engaging all relevant stakeholders in the value-chain by ensuring the following:-

1. **Accessible:** Provide adequate relevant information all stakeholders on the existence of the GRM and what it seeks to address, how to access the service and where, in order to breach the barrier to access information, which may include a lack of awareness of the GRM mechanism, language barrier, literacy, costs, physical location and fears of stigmatization.

2. **Transparency:** In order to build trust on the mechanism, all stakeholders need to be informed about its progress, providing sufficient information about the mechanism's performance and effectiveness while maintaining confidentiality of the undertakings particularly those that wish to remain anonymous,

3. **Legitimate and accountability:** the process needs to be accountable and free from mis-conduct to be able to be legitimate and accountability for ensuring that the parties to a grievance process cannot interfere with its fair conduct, is typically one important factor in building stakeholder trust.

4. **Predictable:** The GRM process has to be clearly spelt out with an indicative timeframe for every stage, with the different available outcomes and how monitoring will be conducted, together with its reporting requirements.

5. **Equitable:** The mechanism will ensure that aggrieved parties have reasonable access to sources of information, advice and expertise requisite to engage in a grievance process on fair, informed and respectful terms. Where imbalances are not redressed, perceived inequity can undermine both the perception of a fair process and the GRM's ability to arrive at durable solution.

6. **Enabling continuous learning:** the process of implementing GRM in a just and equitable fashion will serve as a learning curve for the project and the Ministry of Fisheries & Water Resources in subsequent undertakings, as it will serve as best practices, particularly cases that tend to re-occur, their frequencies, causes, and patterns.

Table 16:GRM Structure at various levels

COMMITTEE LEVEL	MEMBERS	FUNCTION
Central level	Director DWR, Project Coordinator, Gender Expert,	Receive complaints to could not have been resolved at the regional level related to the project
Regional Level	The Regional Governor, the CEO of Area Council, Chairperson of Area Council, Women Leader, CDO, DWR, NEA	Receive, investigate and resolve out standing complaints from the district level committee. Directly receive, investigate and resolve complaints related to the project
District Level	District Chiefs, MDFTs, Alkalos, Women Leader	Receive, investigate and resolve

Monitoring & Evaluation

Monitoring and evaluation of the Resettlement Policy Framework will be performed on a continuous basis. Monitoring of the resettlement process will be the responsibility of the PCU, whereas evaluation will be carried out by an external agency. It is important in monitoring that feedback is provided to the various partner agencies so that the problems identified can be resolved and avoided for the rest of the resettlement process

Monitoring will be done at two different levels. i.e. Internal and External Monitoring

- The Project Coordinator will assess the functioning of the GRM and undertake spot checks on all the process, while the Monitoring & Evaluation Expert will do the following:
- Ensure accurate entry of GRM data into the Database developed;
- Produce compiled reports to the format agreed with the Project Coordinator;
- Provide a monthly/quarterly snapshot of GRM results, including any suggestions and questions, to the project team and the management;
- Review the status of complaints to track complaints not yet resolved and suggest any needed remedial action.

Reporting Requirements of the M&E Expert

Reporting will be done on a monthly, quarterly and annual basis through the generation of progress reports submitted to the Bank. (Quarterly and Annual) Progress reports shall have a section n on GRM which will provide updated information on the following: -

a. Status of establishment of the GRM (procedures, staffing, training, awareness building, budgeting, etc.).
b. Quantitative data on the number of complaints received, the number of complaints relevant, and the number of complaints resolved.
c. Qualitative data on the type of complaints and answers provided, and issues that are unresolved.
d. Time taken to resolve complaints.
e. Channels through which the grievances were received
f. Number of grievances resolved at the lowest level, raised to higher levels
g. Satisfaction of the complainant with the action taken
h. Any procedure related issues
i. Factors that may affect the use of the GRM/beneficiary feedback system
j. Any corrective measures adopted.

NB: *The above reporting requirements for Quarterly Progress Reports and Annual Progress Reports will also be reported in Bank supervision mission Aide-Memoires.*

External Monitoring

NEA will undertake external monitoring. The frequency and scope of this monitoring will be determined in the Memorandum of Understanding to be signed between the PCU and NEA. The monitoring system will:

a) Alert PCU and the Ministry of Fisheries & Water Resources on any grievances recorded during the period under review.

b) In the case of land acquisition, provide timely information about the valuation and negotiation process;

c) Report any grievances that require resolution

Referenced from CSRWASHDEP GRM MANUAL – JUNE 2023

CHAPTER 8: INSTITUTIONAL CAPACITY BUILDING AND STAKEHOLDER ENGAGEMENT

Capacity building and Institutional strengthening is an important component of the project earmarked to empower the key stakeholders for effective implementation. In chapter two of this report, the relevant stakeholder institutions have already been identified. Each of these institutions have been assessed and their capacity gaps identified. To facilitate the implementation of this SS-ESMP, it is resolved that these identified gaps are filled in order to allow for effective participation of the parties.

The capacity gap assessment of the stakeholder institution was done through consultations, which is an intrinsic part of the EIA process. This section of the report dilates on strategies earmarked for institutional capacity strengthening, engagement plan and sensitizations, as discussed under the following sub-headings:

8.1 Strategies for enhancing the capacity of project staff and stakeholders in environmental and social management

Following the identification of stakeholders and capacity gaps identified during the consultation process, the list of stakeholders is listed below and the areas where their capacity needs to be enhanced.

1. **WASH committee**:

The Wash Committee should be empowered to sustainably manage the WASH infrastructure. More training should be geared toward this committee as they are entry point for the WASH infrastructure development and management. The Following areas are eye-mark for the WASH committee.

Sensitization on water-borne diseases: the focus here should be on diseases and deaths that occur in a year and which could be prevented, largely, by avoiding stagnant water ponds in communities. The committee should be willing to tackle the problem of water wastage not only from the taps and burst pipes but from domestic applications of water.

Basic training on maintenance of infrastructure: this has a strong bearing on number 1&2 to avoid ponding due to pipe leakages that could be basically repaired but are instead neglected. This should aim at emphasising the need for the community to take ownership of the investments from the very beginning and prepare themselves for the sole responsibility of maintaining the infrastructure. The community should agree to identify volunteers who would be trained and the modalities of identifying such people.

Introduction of compulsory savings schemes: examples abound from other projects where this has worked with the sole purpose of ensuring that beneficiaries are able to maintain the facilities provided in the post-Project era. Thus, the key outcomes of consultations on this matter should be the management of the funds and sources of funding.

Assigning individual care to street taps (Tap attendants): this will improve the effectiveness of the facilities' management albeit the existence of a water use management Committee. The

voluntary nature of this responsibility should be very clear at the beginning. It is also possible to create benefits/allowances for the persons involved in the management of street taps.

2. **Field and regional technical staff**:
The regional and field staffs' capacity should be enhanced on E&S matters for the effective implementation of the mitigation measures for this SS-ESMP. They will also be provided with the monitoring tools and techniques, and reporting templates. Their capacity will also be enhanced on the national Environmental laws, and regulations, adhering to international standards and the AfDB environment and social instruments.

3. National stakeholders:
The capacity of the national relevant/key stakeholders of the project to be enhanced for the effective implementation and enforcement of the mitigation measures, national laws, and regulations, adhering to international standards and the AfDB environment and social instruments.

8.2 Stakeholder engagement plan, including consultation processes and mechanisms for addressing concerns and grievances

The anticipated impacts of the proposed project are considered to be low as mentioned in the previous chapter. This implied that the potential for grievances is low. Nonetheless, the potential for actions that may trigger grievances cannot be completed ruled out hence the need for a strategy to be put in place to address such concerns as and whenever they occur.

First and foremost, the communities should be properly sensitized on the proposed project and associated activities. This will enable especially the communities to be informed about the project, know about their benefits they can derived in the various phases and take ownership. Communities taking ownership will facilitate communication and timely action on acts that could potentially impact the project negatively.

Secondly, established structures should be utilized in addressing any potential grievance related issues. These include traditional structures in the communities such as council of elders to be the first point of call-in relation to intra-communities' tension and enter-communities tension. In addition to this and as alluded to in Chapter 9 of this report, there should be a formalized GRM structure in place that will be resourced to enhance their capacity to effectively handle related matters.

Thirdly, regular monitoring visits will be embarked upon by different monitoring teams. This team includes the Regional EIA WG, the central level EIA WG, PCU and the Steering committee. During these monitoring visits, grievances related concerns should be noted and referral made to appropriate forums for redress.

8.3 Awareness and communication activities related to environmental and social aspects

Awareness raising on certain anticipated impacts of the proposed project will be crucial. In the table below, a number of sensitization activities have been outlined to be carried out to mitigate the effects of identified negative impacts.

Table 17: Summary of Awareness and Communication activities related to E&S

Addressed topics	Targets	Persons involved	Tools	Period
Sensitization on Occupational Health and Safety measures	Contractors, beneficiaries, PIPs	Environment, health and safety officers/ NEA – RPO	Mass sensitization	Before start of works and once every three months
Sensitization on generation and management of waste	Company personnel	Environment officer / NEA – RPO/LGA	FGD	Quarterly
Information and sensitization on trenching safety	Site personnel Population	Health & Safety officers/ Contractors	Village meetings	Before start of works and every three months
Sensitization on STIs and HIV/ AIDS	Site personnel Populations	NAS and MoH Health & Safety Officers/	Radio talks, posters, leaflets and mass sensitization	Before start of works and Quarterly during works
Information and sensitization on environmental laws and regulations	Site personnel	Environment, health and safety officers	site briefing of workers	Before start of works and every quarter

CHAPTER 9: LAND ACQUISITION AND RESETTLEMENT

9.1 Description of the land acquisition process for the project (Process of document acquisition etc)

Generally, the Land Tenure System in the Gambia is complex and sensitive. The typical tenure system is communal in most communities; however, this kind of ownership can result in land fragmentation which does not support large-scale investment in production. The land tenure system in URR is generally based on a dual system due principally to the colonial past, which introduced the statutory title and customary tenure (UNDP).

The Lands (Region Act) provide for the proper upkeep of lands in the regions for public goods and accords the Minister Powers to designate lands in any part of the provinces as state lands. The customary land tenure system in most of the project intervention areas is based purely on the traditional system of ownership, which is entirely dictated by the custom and traditions of the people. According to the customary laws, where an original piece of land is cleared by a Kabilo (a collection of families) the ownership of land is vested in the head of the Kabilo. This is the basis of the customary land tenure system, which has evolved. Customary land tenure exists mainly in rural areas. The women folks are particularly discriminated against by the customary laws, which are male-dominated, and this is common in the entire rural Gambia.

The women typically have "user rights" and can cultivate the land but can never own and control it to have the right to dispose of it anyhow but done communally, with each receiving shares accordingly. The land belongs to the clans (Kabilo), and those clans are headed by males, who are the ultimate decision-makers regarding the land and related matters.

The Land Tenure system in the Gambia is complex and sensitive. The common system of tenure is communal in most communities; however, this kind of ownership can result to land fragmentation which does not support large scale investment on production. The consultation revealed some tenure arrangement problem in some communities visited which makes it difficult to assess with proper agreement and as such it is important for the project to ensure that any land identified for subproject activities should be agreed upon to minimize potential future conflicts and by extension ownership responsibilities when it comes to cluster communities. The enforcement and use of Land Reform Policy could provoke tenure conflicts between land owners in communities thus affecting timely project implementation.

Most of the areas are under traditional communal tenure system where rights over land ownership and control are recognized with four forms of land tenure systems: (i) government lands with community rights; (ii) government lands with no community rights (unoccupied lands, wetlands, water catchments, etc.); and (iii) Lease (license) where land is granted by the government to investors for a limited number of years (99) years

9.2 Legal and policy frameworks guiding land acquisition and economically and physically displaced Persons

In the Gambia, there is no specific legal framework that addresses resettlement but the Land Acquisition and Compensation Act, 1991, seeks to deal with matters of land compensation, including land expropriated for public use. However, it should be noted that the proposed project activities will not involve compulsory acquisition of land. All the lands to be utilized

for the proposed project works will be provided by the communities themselves. A previous need assessment done has as part of its criteria for consideration by the project that the communities should make land available.

This requirement is made stringent in order to not incur liability for the project for lands acquired for project related activities. However, it is reckoned that the land ownership regime in the regions rest entirely with individual clans in line with customary law. It may happen that not all members of a particular clan will agree to alienation of clan land for the general goods of the community hence an avenue for grievance. For this reason, an attempt is made to discuss the salient provision in relevant laws as it relates to expropriation of land.

The Laws on Compulsory acquisition of Lands (Provinces) Act 1991 and the State Lands Act 1991, the other relevant national laws with respect to compulsory land acquisition, compensation and resettlement are as follows: - the National Constitution 1997 and the Land Acquisition Act of 1991.

The Constitution of the Republic of Gambia (1997) recognizes and upholds the principle of private ownership of lands. Although the State has the inherent right of compulsory acquisition, the Constitution clearly states that this can only be done in public interest whilst laying down specific conditions as to how this could be done. The acquisition must be considered a public necessity (in the interest of defence, public safety, town, and country planning, etc.) to justify the loss of land (Article 22). Section 1(c) provides for the prompt payment of fair and adequate compensation and aggrieved persons have a right of access to a court or other impartial and independent authority for redress. Where the compulsory acquisition involves the displacement of any inhabitant who occupy the land under customary law, the Government shall resettle them on suitable alternative land with due regard to their economic wellbeing and social and cultural values. An important provision in the Constitution (Section 6) provides for returning the lands to the original owners when such lands are not used for the purpose for which they were compulsorily acquired.

The Land Acquisition and Compensation Act (LACA) 1991

This Act provides the legal basis for the acquisition of property by the state for public/ planning purpose. Section 3 of the Act provides that all land acquired under the provisions of the Act shall be designated as state land and shall be administered under the provisions of the State Lands Act 1991. Section 4 empowers the Minister to acquire any property for public/planning purpose paying such consideration or compensation as may be agreed upon or determined in accordance with the Act. Also, Section 11 of the Act provides for compensation for land acquired under LACA. In computerizing the compensation, the market value of the property is taken. The open market value means the best price at which an interest in property might reasonably be expected to be sold at the time of valuation. The method often used to determine the open market value is the cost of the replacement method. This method is based on the current cost of construction of the structures and improvements, including design, supervision, financing costs depreciated to reflect the remaining useful life and the state of repairs of the structure.

In its practical implementation, whenever land is required for public purpose, the Land Administration Board may enter upon and survey such land to ascertain whether the land is suitable for the purpose for which it is required as well as to determine and mark out its boundaries. When the Minister of Lands directs on the acquisition of any such land under this Act, notices are given to all persons having interest or claims to be entitled to the land following a reasonable period of enquiry for the purpose. By such notice, which must be published in the gazette at least once, such persons shall be asked to yield up possession of the land specified in the notice after the expiration of a specified period, which shall not be less than six weeks from the date of the notice. It is only after the expiration of the period specified in the notice that, Government can be entitled to enter and take possession of the land.

However, other aspects of the land management are being considered in other National Policies and Laws. These include the National Constitution of the Republic of The Gambia, 1997, The "State Lands Act 1991", which covers Banjul, the entire Kombo St. Mary as well the Districts of Kombo North, South and Central in the West Coast Region,

The State Lands Act's main objective is to regulate the uncontrolled expansion of housing, especially in urban areas. The law applies in designated areas, currently mainly located in and around Banjul. In designated areas, the law provides mechanisms to replace customary land administration with a system of state-administered emphyteutic leases administered by the state; meaning, the acquisition right is of long-term nature usually 10-99 years. The Ministry of Local Government & regional Administration is the authority responsible for the application of this law. The "Land Physical Planning and Development Control Act" aims to provide a uniform legal framework for the preparation of, approval and control of the development plans. The law was developed specifically to address the problem of spontaneous housing in Banjul and other urban centers.

The "Land Acquisition and Compensation Act" for its part empowers the State to acquire land for public purposes. This law does not recognise boundaries as it applies to the entire national territory. However, land acquisition by the state is subject to the payment of compensation to those affected by involuntary displacement. The cases in which land may be declared of public utility are specified by law, which include roads and water infrastructure projects and major works to be undertaken by the state; hence, the administration of declared public utility lands falls under the "State Act Land".

Procedures and mechanisms that govern state acquisition

There are sets of procedures and mechanisms that govern state acquisition of land which include public notification procedures, compensation procedures and litigation procedures. It makes provision for the Minister of Local Government and Lands to acquire any land for public purposes, for the payment of compensation for such land and to make provision for connected matters thereof. Under the said Act, land to be acquired for public purpose include the following: The national legal framework in land matters is based on four laws dating from the 1990s:

The State Lands Act

The "State Lands Act" - Its main objective is to regulate the uncontrolled expansion of housing, especially in urban areas. The law applies in designated areas, currently mainly located in and around Banjul. In designated areas, the law provides mechanisms to replace customary land administration with a system of state-administered emphyteutic leases administered by the state; meaning, the acquisition right is of long-term nature usually 10-99 years. The Ministry of Local Government & regional Administration is the authority responsible for the application of this law. The "Land Physical Planning and Development Control Act" aims to provide a uniform legal framework for the preparation of, approval and control of the development plans. The law was developed specifically to address the problem of spontaneous housing in Banjul and other urban centers.

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The Land Acquisition and Compensation Act": These laws include sets of procedures and mechanisms to govern state acquisition of land such as public notification procedures, compensation procedures and litigation procedures. It makes provision for the Minister of Local Government and Lands to acquire any land for public purposes, for the payment of compensation for such land and to make provision for connected matters thereof. Under the said Act, land to be acquired for public purposes such as for community collective benefits.

Other regulatory frameworks include the following:-

"The Surveys Act 1991": seeks to register in the *'cadastre'* - an official register of the ownership, extent and value of the land which also helps in taxation. Land occupied throughout the national territory. The law creates a « survey Board » issuing licenses to land surveyors. The aim is to increase the number of professionals with the right to identify land in urban and rural areas. In fact, the census of the parcel state is a prerequisite for land registration and a conversion from customary tenure to emphyteutic lease. The highest national standards and those of the World Bank will apply in all cases where there will be divergence since the highest standard automatically meets the obligations of the other standard.

The Amended Women's Act 2015: This Act provides pre-eminence over personal religion, so female heirs are legally entitled to the same amount as their male counterparts, as it enables women to buy and own landed properties across the nation with discrimination as it provides strong influence of religion and customary norms which is not always practiced. Any deprivation against women is regarded as unconstitutional and judicial redress can be sought.

9.3 Principles and procedures for compensation, livelihood restoration, and community participation.

The CSRWASHDEP project conducts stakeholder consultations during both project formulation and ESMP/F obligations. The project is designed in such a way that issues of involuntary resettlement will be avoided as much as possible so as to minimize the cost of compensation. For houses and other permanent structures such as fences, issues of replacement cost will not arise given that the project will avoid running its pipes and trenches around permanent structures. The same applies for fruit trees, sacred places and community assets alike.

However, per the *'Grant Agreement'*, the government of the Gambia is expected to make counterpart contribution and that, land would have to be given in-kind on the part of the beneficiary communities. The Project make its due diligence by obtaining land from the communities and have them endorsed by the regional authorities. Thereafter, a valuation exercise was conducted on pieces of land with their respective Location Plans and Maps through the Department of Lands & Surveys with costing attached.

However, the landed properties issued by community members may include portions of their farmlands hence the loss of food and cash crops. The annual food crops include early/late millet, maize, sorghum and rice. Cash crops comprise groundnuts, sesame and cotton. These crops are important sources of food, nutrition and cash income of families and individuals and their destruction will adversely affect the socioeconomic conditions of the PAPs. The valuation of annual crops would be based on the unit area cultivated (preferably in ha) multiplied by the yield potential (kg)/ha and the current market price (price/kg) of the crop to derive the value of income from one season's production. The same computation methods would be used for the following year's harvest.

COMPENSATION FOR LOSS OF ACCESS TO NATURAL RESOURCES

Although the CSRWASHDEP project does not want to displace inhabitants, but it cannot totally avoid the loss of access to natural resources and the types of assets to which access may be lost could include pasture, fruit trees, medicinal plants, fibre, firewood, and other non-timber forest resources, croplands, fallow lands, woodlots, which are common properties that are collectively owned by communities. Therefore, Lack of access to these communal resources may result in economic displacement. Compensation measures to be implemented for these loses will be either to allow continued access to affected resources or to provide access to alternative resources with equivalent livelihood-earning potential and accessibility. Where common property resources are affected, benefits and compensation associated with restrictions on natural resource usage may be collective in nature. If it is demonstrated that replacement land or resources are unavailable, the project will offer economically displaced persons options for alternative income earning opportunities, such as credit facilities, skills training, business start-up assistance, employment opportunities, or cash assistance additional to compensation for assets.

It is important to note that, cash assistance alone frequently fails to provide affected persons with the productive means or skills to restore livelihoods. Whenever the project must take possession of land not owned by the farmer, compensation must be provided also for the non-owner farmer for the loss of earnings (livelihood/economic loss) whilst the owner is compensated for the loss of the land. In this case, the loss of an asset may lead to two or more people being compensated.

Table 18: Method of Compensation

Cash Payments	**Compensation will be calculated in Gambian Dalasi based on the replacement cost**
In -kind compensation	This may include items such as land, houses and other building materials, seedlings, agricultural inputs, and financial credits for equipment
Resettlement and Economic Rehabilitation Assistance	Assistance may include livelihood restoration measures, moving allowances, transportation, labour and land registration cost

Table 19: Matrix for Compensation

COMPENSATION CATEGORY	**TYPE**	**METHOD OF COMPENSATION**
Land acquisition and compensation (Permanent acquisition)	Customary lands, private lands	Prevailing market value of the land to be acquired; otherwise, replacement value Owner has the opportunity of being allocated a new plot if one is available and it is suitable to owner's needs Agricultural land Less than 20% of land holding affected Land remains economically viable. Compensation for affected land equivalent
Compensation for crops	Standing crops (include *groundnuts, maize, millet, etc.)*	Valuation based on unit area cultivated (preferably in ha) multiplied by the yield potential (kg/ha)
Trees (*includes timber, fruit trees)*	Timba	Valuation based on prevailing market price or the tariffs from the Forestry Department
	Banana	Market value of the trees harvested in that year plus one additional year
	Other fruit trees (mangoes, oranges, coconut, guava, papaya)	Number of trees affected x by the average annual yield potential/tree x the number of productive years at time of felling x the prevailing market price

CHAPTER 10: ENVIRONMENTAL AND SOCIAL MONITORING REPORTS

Introduction:

Monitoring is essential to ascertain compliance with stated mitigation commitments in the ESMP. Monitoring reports serve as an indicator for progress made in the implementation of the safeguards. As part of the implementation of this SSESMP, as noted in chapter 6 above, there will be two-layer monitoring programmes: internal monitoring by the project`s E&S specialist and the mounting by the EIA Working Group under the guidance and coordination of the NEA. This section of the report elaborates on the reporting method, frequency, procedures, etc as detailed in the following sub-headings:

9.1 Reporting formats and frequency for environmental and social monitoring

The E&S expert`s internal monitoring will be based on the requirements stipulated in the Bank`s Environmental and Social Safeguards instruments as well as national requirements. The E&S specialist, taken into account the above-mentioned requirements, is to design a reporting template for individual contractors` E&S experts for their periodic reporting. The E&S Expert is also expected to collaborate with NEA for quarterly monitoring through the EIA Working Group. The NEA as the national regulator on Environmental and Social Safeguard implementation, will, through the EIA Working Group, be conducting an independent monitoring of the proposed project intervention sites to ensure compliance. The reports generated by this body is expected to follow the format developed by the NEA.

On-site monitoring report by the contractors` E&S experts should be submitted to the project`s E&S Expert bi-weekly during implementation of work. Internal monitoring reporting by the E&S Expert is anticipated to be monthly. This will enable timely detection and implementation of actions on cases of non-compliance on the part of the contractors. On the other hand, the EIA Working Group`s report, is expected to be submitted to the PCU on quarterly basis.. In addition to these quarterly monitoring, the EIA Working Group may also decide to undertake unscheduled monitoring as and when necessary.

10.2. Reporting

E&S related reports from the various sites by the constrictors` E&S experts should be communicated to the project`s E&S Expert. These reports can be shared through emails or physical submission to PCU. The E&S Expert, as an employee of the project, is expected to submit his/her monitoring reports to PCU through the project coordinator. The reports need to be submitted at the end of each field mission conducted. Reporting by the EIA Working Group are to be sent to the NEA, who will have to evaluate the findings and communicate to the PCU accordingly.

10.3. Monitoring method

In consideration of the nature of planned work activities, monitoring will require that the individual/team is present physically at the individual sites. In this context, the contractors` on-site E&S Experts are anticipated to be at the individual sites at all times during implementation

of works. The E&S Expert of the project will be undertaking monthly treks to the all the projects sites in the region, which he/she is expected to observe the physical environment, conduct interviews with beneficiaries as well the contractors` E&S experts on implementation and effectiveness of the outlined mitigation measures in this SSEMSP report.

The Quarterly Monitoring by the EIA Working Group will equally be based on the visual observations by the team at the various intervention sites. The team is as well expected to contact the contractors, consultant, and the members of the community as well as the project through the E&S Expert to seek clarification on environmentally and socially related matters of concern.

In addition to visual observation indicated above, there will be a need to collect samples to establish if certain thresholds have been exceeded. In this respect, soil samples will need to be collected to ascertain level of pollution in case of contamination cause by oil spillage; quality of the water in case of contamination by pollutants, among others. Monitoring of water quality is another essential aspect that will be looked at. For all of these, monitoring of the parameters will be facilitated by use of portable gadgets at field level to ensure timely action.

10.4. Monitoring schedules & Frequency

Monitoring programme will be in twofold: one that will be continuous to be performed by the contracts' E&S experts at the project site, and one that will be periodic on the part of the project`s E&S Expert and those of the EIA Working Group.

The contractors` E&S Expert are expected to be present at project implementation site at all times during the implementation of works. They are expected to take note of all activities during work to assess if works are being implemented taking in to account the outlined mitigation measures in this SESMP and report accordingly.
The project`s E&S Expert, as noted in 9.3 above, will be conducting monthly visits to the project sites. He/she may also, depending on circumstances, embark on unscheduled visit to sites and take part in specific site meetings with a view to addressing concerns.

The EIA Working Group, will be carrying out quarterly monitoring visits. There will be four quarterly monitoring visits by the team in a calendar year. However, the group may also undertake unscheduled visit as and when required.

Table 20: Monitoring schedule

No	Aspects to be Monitored	Project Phase	Location	Monitoring Indicators	Frequency of Monitoring	Responsible
01	Physical environmental conditions: ▪ vegetation ▪ wildlife species ▪ grassland/ domestic animals grazing grounds	Construction/ operational phases	Project sites	● Number of tress felled/pruned ● Number of trees transplanted in compensation for those felled ● Number of habitats destroyed. ● Number of domestic animals grazing annexed	Daily/monthly/quarterly	● Contractor (site E&S expert) ● Project E&S Expert ● EIA WG
02	Esthetic environment (environmental quality) ▪ Air quality ▪ Noise and vibration ▪ Management of construction waste ▪ Ponding of water/waste water near stand pipes	Construction and operational phase	Project sites	❖ Presence of dust particles in the air; ❖ Health related complication on persons (employees and those near work sites) ❖ Number of complaints lodged from affected persons ❖ Evidence of indiscriminate dumping within, near and away from construction sites ❖ No of reported cases of water borne diseases (hospital records) ❖ Record of meetings that took place ❖ Mission reports	Daily. Monthly and quarterly	● Contractor (site E&S expert) ● Project E&S Expert EIA WG

No	Aspects to be Monitored	Project Phase	Location	Monitoring Indicators	Frequency of Monitoring	Responsible
03	Sociocultural/economic/ public health: ● Occupational health & safety ● Incidence of STIs/STDs occurrence ● Conflict related to migrant workers ● Conflict related to dispossession of privately owned property ● GBV/SHE ● Child labour	Construction and operational phases	Project sites	❖ Number of cases of injuries/death. ❖ Hospital records ❖ Number of incidence recorded ❖ Number of incidence recorded ❖ Number of incidence recorded ❖ Presence of and engagement of minors at construction sites during work	Daily/ monthly/ quarterly	● Communities ● Contractors` E&S Expert ● Project E&S Expert ● EIA WG

10.5. Documentation and reporting of monitoring results, including data collection, analysis, and interpretation

The anticipated impacts of the proposed project work can only be ascertained when monitoring outcomes are presented in provable records. This require that all monitoring outcomes are documented after the data collected, analysed and accurately interpreted.

As noted in 9.3 above, some aspect of monitoring will entail sample collection, which will have to be analysed based on the readings obtained from the portable gadgets utilized for the purpose to determine if acceptable threshold for the parameters monitored have been reached. These monitoring records will be measured against the baseline records collected prior to the implementation of the project work in order to help ascertain the impact of the project.

Records can only be generated accurately if all categories of monitoring discussed above make use of the apparatus needed to collect the data from sites. Thus, the monitoring by the contractors' E&S Expert, the Project E&S Expert and the EIA Working Group should ensure that the individuals involve are equipped with the necessary tools during field missions.

10.3 Reporting on compliance with environmental and social requirements and permit conditions

The effectiveness of the mitigation and enhancement measures outlined in this SSESMP as well as level of compliance with permit conditions should be assessed and ascertained. For this and like the monitoring requirements mentioned above, the responsibility is a shared one. At one extreme is the responsibility is on the individual contractors and the PCU to self-audit. At the other extreme, the regulator (NEA), through the EIA Working Group will be required to carry out verification visit to the project sites, after receipt of reports from the PCU.

The above-mentioned reporting is in line with requirements set out by regulation 30 of the EIA Regulations cited above, to determine, on the one hand the project`s compliance with the environmental approval conditions, and on the other hand the effectiveness of the identified mitigation/enhancement measures in this report.

Due to the timing of planned work activities, it is recommended that these compliance reporting is carried out at the end of the year. Such timing will allow for a holistic review of performance on identified mitigation/enhancement measures with monthly report by the E&S Expert and EIA Working Group`s quarterly reports serving as the basis for such holistic review.

The overall purpose of environmental and social monitoring is to ensure that mitigation measures are implemented and are effective. Environmental and social monitoring will also enable response to new and developing issues of concern during the project implementation and, therefore, it will ensure that project activities comply with and adhere to environmental provisions and standard specifications of the Government of The Gambia of the Bank.
The overall responsibility of the environmental and social monitoring will lie with the Ministry of Fisheries and Water Resources through the Project Management Unit (PMU) of the

Department of Water Resources in close conjunction and collaboration with the National Environmental Agency – NEA (the overall national authority on environment). It was noted that the PMU does not have environmental experts as staff and as such the use of NEA staff as environmental experts will be very useful. NEA has staff up to the district level who will provide environmental supervisory assistance. However, a good number of key staff involved in the implementation of the project may require on-site-training to enhance their ability on various environmental aspects and reviews, including monitoring and compliance which will be helpful in handling environmental and social aspects of the project. The whole exercise of ESMF monitoring will involve monitoring compliance with regulations, managing worksites, executing specific environmental and social works and seeking solutions to emerging environmental problems.

On-site monitoring of the ESMF will be the responsibility of the project managers in charge of oversight. Environmental compliance will be overseen by the regional environment officers in conjunction with other arms of the governments responsible for environmental management. The ESMF monitoring team will ensure regular reporting, depending on the aspects being monitored to avoid any serious environmental social consequences. Among the key issues to be monitored will be: (i) the status of the biological conditions; (ii) status of the physical works; (iii) the technical and environmental problems encountered; (iii) proposed solutions to the problems encountered; and, (v) the effectiveness of environmental and social measures adopted

To ensure compliance, the ESMF monitoring programme is proposed for implementation is at two-levels – the supervisory activity carried out by the control or supervision missions of the African Development Bank and the regular quarterly monitoring activities conducted by the PMU and NEA in collaboration with key government departments. The regular monitoring will ensure that site activities are conducted in compliance with agreed local environmental standards under the laws of The Gambia. The supervisory or control missions may be once every year and their role will include: (a) reviewing the contractor's detailed responsibilities on ESMP or ESIA and its specific procedures; (b) ascertaining assessment of the negative impacts identified; (c) ascertaining the effectiveness of proposed measures; (d) studying specific applicability conditions for the proposed measures; (e) monitoring the implementation of measures during the works implementation phase; (f) monitoring the recommended measures; (g) proposing remedies in the event of occurrence of major impacts; and (h) conducting environmental compliance and assessment at the end of the project. Applying the environmental monitoring indicators adopted, the control mission will seek to measure the project's progress, in a manner that highlights the various objectives in line with national goals and in line with the Bank's Integrated Safeguards System (ISS).

The responsibility for both surveillance and routine monitoring during operations phase should be assigned to the existing Government framework for environmental monitoring that is EIA monitoring team and the NEA's *regional* network of Offices. The EIA team comprises senior government technicians from stakeholder institutions in Banjul and surroundings. Therefore, the team may not be able to keep up with very frequent visits of surveillance; in this regard, it

is suggested that surveillance be conducted by the NEA *Regional Offices* and field office of the DWR whilst the team takes charge of the monitoring.

CHAPTER 11. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) IMPLEMENTATION BUDGET

The ESMP implementation budget encompasses all expenses associated with executing the requirements and recommendations outlined in this Environmental and Social Management Plan (ESMP). The ESMP emphasizes the integration of environmental and social considerations into the project's implementation to ensure its sustainability, along with its various components and sub-components. Key issues identified in the ESMP include the implementation and management of the ESMP itself, training and capacity building initiatives, environmental screening processes, and mechanisms for reviewing and monitoring. These issues are thoroughly detailed and explained within the ESMP document. In respect of the operationalization of the Site-Specific ESMP, a budget detailing out the list of activities and their respective costings was prepared. The total estimate is $ 215,860.00 (Two Hundred & fifteen thousand, eight- Hundred & sixty) US Dollars as shown in **Table 21**.

Table 21: Detailed breakdown of the ESMP Implementation budget

DESCRIPTION	TRAINING Modules	TIME FRAME	TOTAL $	Responsible person
Total GRM implementation budget			10,000.00	
Consultant	Preparation of site-specific ESMP		15,000.00	consultant
CAPACITY BUILDING FOR TECHNICAL OFFICERS			**20,940.00**	
EIA Working Group/ MDFTs (10 per region)	Environmental related issues	3rd Quarter		consultant
EIA Working Group/ MDFTs (10 per region)	GRM	3rd Quarter		
EIA Working Group/ MDFTs	Gender and GBV	3rd Quarter		
Capacity building for Steering Committee Members			**11,400.00**	
Project Steering Committees	Environmental Safeguard matters	3rd Quarter		Consultant
Project Steering Committees	GRM	3rd Quarter		
Project Steering Committees	Gender and GBV	3rd Quarter		
Capacity building for Technical Committee Members			**8,600.00**	Consultant
Technical Committee	Environmental related issues	3rd Quarter		
Technical Committee	GRM	3rd Quarter		
Technical Committee	Gender and GBV	3rd Quarter		

Institutional Strengthening and Capacity building and general public awareness programs			**5,800.00**	NEA/PCU
Training / Sensitization of Contractors and Consultant Supervision	Gender mainstreaming & Gender-Based Violence	3rd Quarter	-	
Training / Sensitization of Contractors and Consultant Supervision	Health & Safety and environmental matters	3rd Quarter	-	
Capacity building of beneficiaries			**91,240.00**	PCU
VDCs & WATSAN	Sensitization on environmental monitoring & Surveillance	4th Quarter		
Implementation of ESMP			**18,880.00**	NEA/EIA WG
Regional ESMP Monitoring Activities (monthly)				
National ESMP Monitoring Activities (quarterly)				
Regular supervision- Environmental and safeguard aspects			5,000.00	AfDB/PCU
Control missions/ annual Environment & Compliance aspect			5,000.00	PCU/NEA
Annual environmental compliance Audit			20,000.00	Consultant
Total Amount			**211,860.00**	
Contingency			**4,000.00**	
Total Amount including contingency in USD			**215,860.00**	
GMD Equivalent @ D62/$			**13,383,320.00**	

CHAPTER 12: CONSULTATIONS AND PUBLIC PARTICIPATION

12.1.Rationale for consultation and disclosure

Consultation and public participation are legal requirements to address concerns regarding the environmental impacts of any development project or program. Throughout the preparation of this Environmental and Social Management Plan (ESMP), extensive consultations and public participation were conducted. It is anticipated that further consultations will take place during subsequent stages of the project development process. The consultation and participation process involving the public, key stakeholders, interested parties, and those affected by the project plays a crucial role in providing information about the project's purpose, objectives, and key activities during the development and implementation phases.

The objectives of stakeholder and public participation include:

1. Providing affected individuals with clear, accurate, and comprehensive information about the proposed project and its potential environmental impacts.
2. Allowing those affected by the project to express their views, raise concerns, and propose alternative arrangements that may help mitigate environmental and social impacts.
3. Enabling affected individuals to suggest ways of avoiding, reducing, or mitigating negative impacts and enhancing positive impacts of the project activities.
4. Incorporating the needs, preferences, and values of stakeholders into the proposed project/program.
5. Offering opportunities to avoid and resolve disputes and reconcile conflicting interests among project stakeholders.
6. Enhancing transparency and accountability in decision-making processes.

Stakeholder consultations and public participation were conducted during the preparation process of this ESMP, and they will continue during the implementation phase to ensure ongoing communication between the project proponents/implementers and various stakeholders, including direct beneficiaries of the project. This will facilitate regular updates, allow for modifications and adjustments, and ensure the implementation of proposed mitigation measures. Additional consultations will be carried out during the ESMP implementation phase, including monitoring based on the concerns raised by affected communities.

12.2 Methodology for Engaging Stakeholders:

The methodology for engaging stakeholders in the consultation process included the following methods:

- Public consultative meetings: Public meetings were conducted, with a particular focus on engaging communities and technical officials from the regions. These meetings provided a platform for stakeholders to express their views, concerns, and suggestions regarding the proposed project. The meetings aimed to gather input from a wide range of stakeholders and ensure their active participation in the decision-making process.

- Interviews with key informants: In addition to the public meetings, interviews were conducted with key informants who had valuable insights and expertise related to the proposed project/program. These key informants could include local community leaders, subject matter experts, government officials, or representatives from relevant organizations. The interviews allowed for more focused and in-depth discussions, enabling the project team to gather specific information and perspectives.

- Physical site visits and inspections: Site visits were undertaken to gain a firsthand understanding of the project's location and its potential environmental and social impacts. During these visits, discussions were held with community leaders and members to gather their perspectives and insights regarding the project. The site visits provided an opportunity to assess the local context, engage directly with the affected communities, and understand the specific concerns and interests related to the project.

- Consideration of gender and various age groups: The consultation process recognized the importance of inclusivity and diversity. Gender and various age groups were taken into consideration to ensure that the consultation methods were inclusive and accessible to all stakeholders. This approach aimed to capture a wide range of perspectives and ensure that the voices of different demographic groups, including women, children, and elderly individuals, were heard and considered during the consultation process.

By utilizing these methods, the project team aimed to foster meaningful engagement, promote open dialogue, and gather diverse perspectives from stakeholders. The combination of public meetings, interviews, site visits, and inclusive approaches helped to ensure a comprehensive and inclusive consultation process that considered the interests and concerns of all relevant stakeholders.

12.3 People Consulted, Issues Raised, and Mitigation Measures Shared:

As the project falls under Category 2, the consultation process primarily targeted the involvement of affected communities and stakeholders. The main objective was to engage them in identifying site-specific environmental and social issues that could arise from the project. The purpose of this engagement was to gather valuable insights and data that would inform the drafting of the Environmental and Social Management Plan (ESMP).

During the consultations, stakeholders were given the opportunity to express their concerns, raise issues, and provide input on potential environmental and social risks associated with the project. These discussions aimed to facilitate a comprehensive understanding of the specific challenges and impacts that the project might have on the local environment and community.

Based on the information gathered from the consultations, mitigation measures were proposed to address the identified environmental and social risks. The intention was to develop measures that would effectively minimize or eliminate potential negative impacts and promote positive outcomes. These proposed mitigation measures were designed to align with the project's objectives and comply with relevant environmental and social standards.

An important aspect of the consultations was to secure broad community support for the project. The project team aimed to engage with affected individuals and stakeholders in a transparent and inclusive manner, ensuring that their concerns and perspectives were heard and considered. By seeking endorsement from affected individuals, the project team aimed to build consensus and ensure that the proposed mitigation and management measures were acceptable to the community.
To provide transparency and documentation of the consultation process, appendix III of the report includes a comprehensive list of the individuals who were consulted, the issues raised during the consultations, and the mitigation measures that were shared with stakeholders. This appendix serves as a reference point for stakeholders and interested parties to review the outcomes of the consultation process and understand how their inputs have been incorporated into the ESMP.

CHAPTER 13: CONCLUSIONS AND RECOMMENDATIONS

Conclusion

This SS-ESMP report has been prepared based on environmental and social assessments conducted at the specific intervention sites in the region to equip the PCU and relevant stakeholder with sufficient environmental and social information about the proposed sites, the anticipated impacts, mitigation and enhancement measures and tools to track the implementation of the identified measures.

The project is anticipated to bring substantial economic and social benefits not only to the local communities within the project areas, but to the entire nation as a whole, particularly in enhancing quality water supply and general wellbeing. The negative environmental impacts that have been identified with the implementation of this project are minimal and could be addressed by implementing the mitigation measures proposed in this report to ensure that they pose no threat to the environment and to the communities.

These measures are part of the project's component and will bring no added cost to the implementation process. The project activity will not displace persons as the identified site is not in the residential area. The project sites are either in the village reserved land, a member of the community given his/her land for the proposed infrastructural land, or part of the farmland taken for the proposed infrastructural works.

The benefits of implementing the proposed project are enormous and will address persistent problems of inadequate water supply in the region. This will go a long way in addressing water needs for both human and livestock consumption.

Recommendations

In view of the multi-sectorial nature of the stakeholders, it is prudent that relevant line ministries and other stakeholders are actively involved to address some of the cross-cutting issues such as Health (water borne diseases), sustainable water usage, and protection of the water infrastructure in the communities. The multi-disciplinary approach will ensure that emerging issues and challenges are adequately addressed and on time. In addition to these, the following recommendations should be taken into account for a successful implementation:

1. The contractors and the project proponents should take into consideration all the environmental laws, policy documents, acts regulations measures put in place so as to ensure that due process is followed.
2. The mitigation measures provided/proposed under this SS-ESMP need to be followed so as to address the environmental and social issues that may arise in the course of the implementation of the proposed project.
3. There is a need to have all the necessary occupational health and safety measures put in place to promote the well-being of the workers, especially during the construction phase, and the beneficiaries during both the construction and entire the operational phases

4. Procure portable water quality gadgets for sample tests during quarterly monitoring.
5. Procure noise and dust testing kits to support the EIA working and NEA to monitor these parameters during construction phase.

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20. Environmental & Social Framework for IPF Operations, ESS10:, Stakeholder Engagement and Information Disclosure
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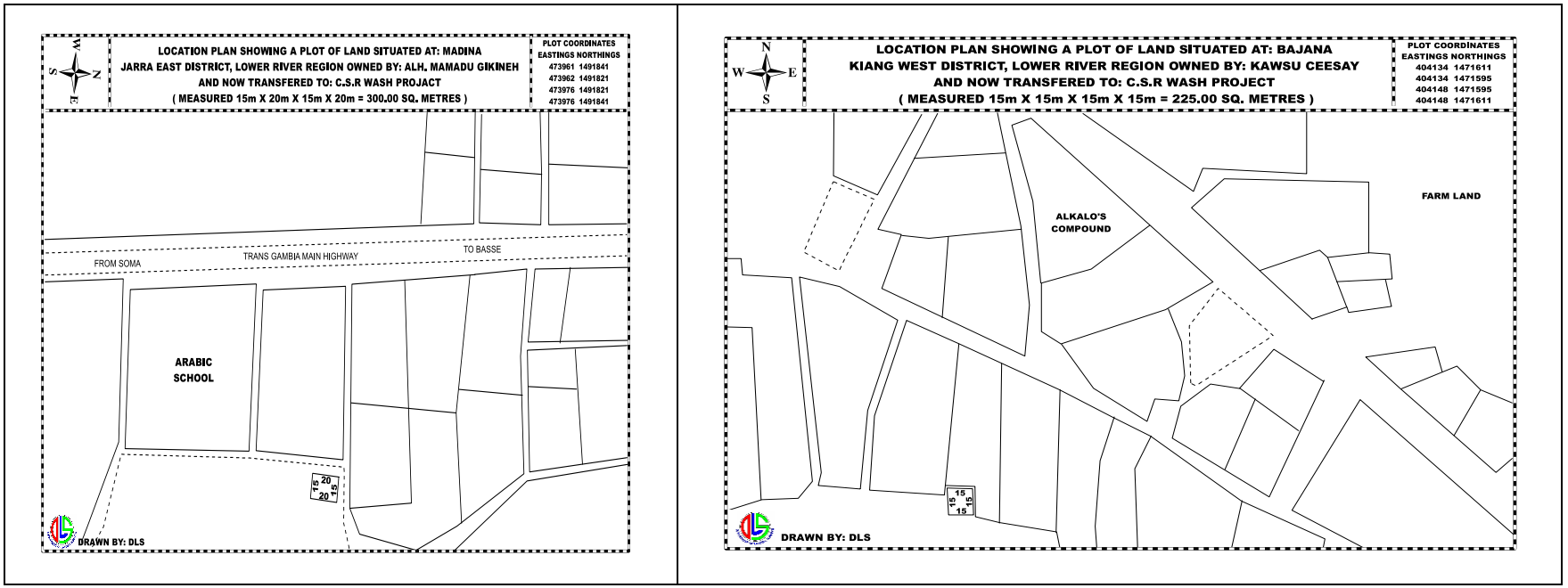
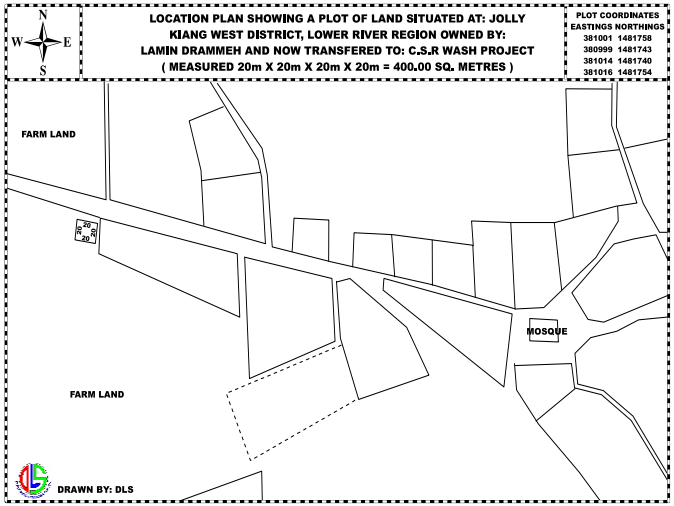
22. ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN, *"Enabling Implementation of Forest Sector Reform in Georgia to Reduce GHG Emissions from Forest Degradation".* VOLUME 2 – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)
23. Community Grievance Redress Mechanism Tool – WWF - Kenya

APPENDICES

I. Detailed maps, diagrams, and plans




N
W
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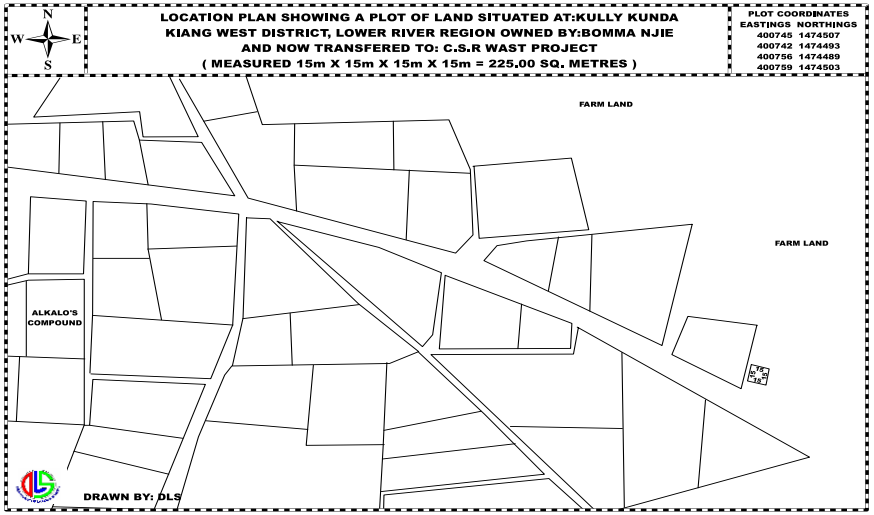
LOCATION PLAN SHOWING A PLOT OF LAND SITUATED AT: JOLLY
KIANG WEST DISTRICT, LOWER RIVER REGION OWNED BY:
LAMIN DRAMMEH AND NOW TRANSFERED TO: C.S.R WASH PROJECT
(MEASURED 20m X 20m X 20m X 20m = 400.00 SQ. METRES)
PLOT COORDINATES
EASTINGS NORTHINGS
381001 1481758
380999 1481743
381014 1481740
381016 1481754
FARM LAND
20
20
20
MOSQUE
FARM LAND
DRAWN BY: DLS


N
W
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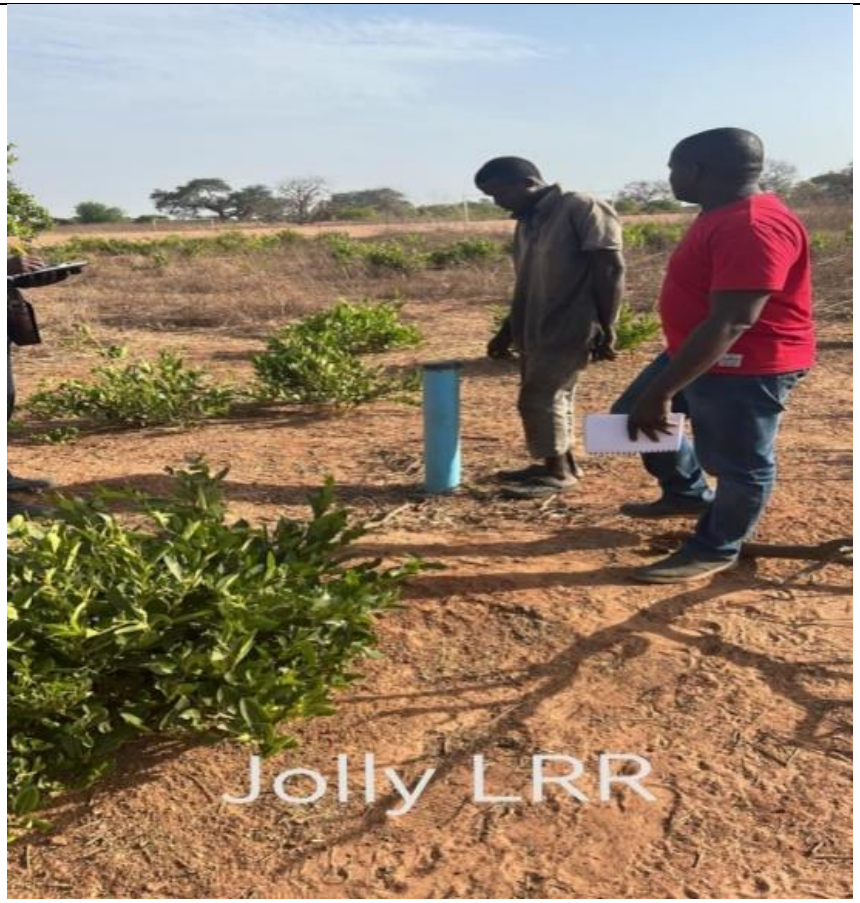
S
LOCATION PLAN SHOWING A PLOT OF LAND SITUATED AT:KULLY KUNDA
KIANG WEST DISTRICT, LOWER RIVER REGION OWNED BY:BOMMA NJIE
AND NOW TRANSFERED TO: C.S.R WAST PROJECT
(MEASURED 15m X 15m X 15m X 15m = 225.00 SQ. METRES)
PLOT COORDINATES
EASTINGS NORTHINGS
400745 1474507
400742 1474493
400756 1474489
400759 1474503
FARM LAND
FARM LAND
ALKALO'S
COMPOUND
15
15
DRAWN BY: DLS

II. Project site pictures for LRR




Bajan LRR


Kulli Kunda LRR

III. Stakeholder consultation records

Name of community	Comments/observation	Potential impact	Nature of impact	scale	Mitigation measures
Jarra Madina	The community is concerned with the late implementation of the project. They are still faced with unquenchable thirst to clean and portable drinking water supply They have some skills workers in plumber, carpentering and mason. They have abled body youth and women who are ready to participate in the next phase of the project They are expecting continuity of works before rainy seasons They have provided their community participation, started saving for sustainability plan and now left with the project to fulfil it promised. Poor networking, pipe laying and reservoirs could encourage effective supply of water supply, spillage of water and breeding place for mosquitos Delay in implementation could cause difficulties in collecting fulfilling annual commitment for sustainability enhancement,	.Land conflict 2.Potential conflict between locals and migrants laborers 3.Gender based violence 4.Occupational Health and Safety 5.Risks of HIV/AIDs/STIs 6.Loss arising from unlawful dispossession of land 7.Thieft of solar panels 8.Influx of migrant labour 9.Introduction of foreign attitudes, lifestyles and behaviours 10. Child Labour	1. Direct impact 2. Cumulative 3. Cumulative 4..Direct impact 5. Induce impact 6. Direct impact 7. Direct impact 8. Induced impact 9. Induced impact - 10.Indirect impact	1.None 2.Moderate 3.Moderate 4.Moderate 5.Moderate 6.None 7.Moderate 8.Moderate 9.Moderate - 10.None	1.Share the land documentation with relevant authorities and family of the traditional landowner 2.Conduct community sensitization and engagement with the contractor 3. conduct community sensitization and engagement on women's act 4.Provide workers protection with health and safety measures on sites 5. Conduct health education and sensitization 6.Dig trenches along the roads and avoid farmlands 7. Sealed Solar panels and provide watchman if necessary 8. Reduce migrant laborers and employ more labour force in the community 9. Caution workers to respect local values and customs 10. introduce the contractor and community to child act -

Bajana	The community is concerned with the late implementation of the project. They are still faced with unquenchable thirst to clean and portable drinking water supply They have some skills workers in plumber, carpentering and mason. They have abled body youth and women who are ready to participate in the next phase of the project They are expecting continuity of works before rainy seasons They have provided their community participation, started saving for sustainability plan and now left with the project to fulfil it promised. Poor networking, pipe laying and reservoirs could encourage effective supply of water supply, spillage of water and breeding place for mosquitos Delay in implementation could cause difficulties in collecting fulfilling annual commitment for sustainability enhancement,	1.Land conflict 2.Potential conflict between locals and migrants laborers 3.Gender based violence 4.Occupational Health and Safety 5.Risks of HIV/AIDs/STIs 6.Loss arising from unlawful dispossession of land 7.Thieft of solar panels 8.Influx of migrant labour 9.Introduction of foreign attitudes, lifestyles and behaviours 10. Child Labor	1. Direct impact 2. Cumulative 3. Cumulative 4..Direct impact 5. Induce impact 6. Direct impact 7. Direct impact 8. Induced impact 9. Induced impact - 10.Indirect impact	1.None 2.Moderate 3.Moderate 4.Moderate 5.Moderate 6.None 7.Moderate 8.Moderate 9.Moderate - 10.None	1. .Share the land documentation with relevant authorities and family of the traditional land owner 2.Conduct community sensitization and engagement with the contractor 3. conduct community sensitization and engagement on women's act 4.Provide workers protection with health and safety measures on sites 5. Conduct health education and sensitization 6.Dig trenches along the roads and avoid farmlands 7. Sealed Solar panels and provide watchman if necessary 8. Reduce migrant laborers and employ more labour force in the community 9. Caution workers to respect local values and customs 10. introduce the contractor and community to child act -

Kulli Kunda	The community is concerned with the late implementation of the project. They are still faced with unquenchable thirst to clean and portable drinking water supply They have some skills workers in plumber, carpentering and mason. They have abled body youth and women who are ready to participate in the next phase of the project They are expecting continuity of works before rainy seasons They have provided their community participation, started saving for sustainability plan and now left with the project to fulfil it promised. Poor networking, pipe laying and reservoirs could encourage effective supply of water supply, spillage of water and breeding place for mosquitos Delay in implementation could cause difficulties in collecting fulfilling annual commitment for sustainability enhancement, -	1.Land conflict 2.Potential conflict between locals and migrants laborers 3.Gender based violence 4.Occupational Health and Safety 5.Risks of HIV/AIDs/STIs 6.Loss arising from unlawful dispossession of land 7.Thieft of solar panels 8.Influx of migrant labour 9.Introduction of foreign attitudes, lifestyles and behaviours 10. Child Labor	1. Direct impact 2. Cumulative 3. Cumulative 4..Direct impact 5. Induce impact 6. Direct impact 7. Direct impact 8. Induced impact 9. Induced impact 10.Indirect impact	1.None 2.Moderate 3.Moderate 4.Moderate 5.Moderate 6.None 7.Moderate 8.Moderate 9.Moderate 10.None	1.Share the land documentation with relevant authorities and family of the traditional land owner 2.Conduct community sensitization and engagement with the contractor 3. conduct community sensitization and engagement on women's act 4.Provide workers protection with health and safety measures on sites 5. Conduct health education and sensitization 6.Dig trenches along the roads and avoid farmlands 7. Sealed Solar panels and provide watchman if necessary 8. Reduce migrant laborers and employ more labor force in the community 9. Caution workers to respect local values and customs 10. introduce the contractor and community to child act -

Joli	The community is concerned with the late implementation of the project. They are still faced with unquenchable thirst to clean and portable drinking water supply They have some skills workers in plumber, carpentering and mason. They have abled body youth and women who are ready to participate in the next phase of the project They are expecting continuity of works before rainy seasons They have provided their community participation, started saving for sustainability plan and now left with the project to fulfil it promised. Poor networking, pipe laying and reservoirs could encourage effective supply of water supply, spillage of water and breeding place for mosquitos Delay in implementation could cause difficulties in collecting fulfilling annual commitment for sustainability enhancement,	1.Land conflict 2.Potential conflict between locals and migrants laborers 3.Gender based violence 4.Occupational Health and Safety 5.Risks of HIV/AIDs/STIs 6.Loss arising from unlawful dispossession of land 7.Thieft of solar panels 8.Influx of migrant labour 9.Introduction of foreign attitudes, lifestyles and behaviours 10. Child Labor	. Direct impact 2. Cumulative 3. Cumulative 4..Direct impact 5. Induce impact 6. Direct impact 7. Direct impact 8. Induced impact 9. Induced impact 10.Indirect impact	1.None 2.Moderate 3.Moderate 4.Moderate 5.Moderate 6.None 7.Moderate 8.Moderate 9.Moderate 10.None	1.Share the land documentation with relevant authorities and family of the traditional land owner 2.Conduct community sensitization and engagement with the contractor 3. conduct community sensitization and engagement on women's act 4.Provide workers protection with health and safety measures on sites 5. Conduct health education and sensitization 6.Dig trenches along the roads and avoid farmlands 7. Sealed Solar panels and provide watchman if necessary 8. Reduce migrant laborers and employ more labour force in the community 9. Caution workers to respect local values and customs 10. introduce the contractor and community to child act

Monitoring data and analysis

No	Site Name	District	Site Description	Potential Risk/Mitigation measure
1	Kulli Kunda	Kiang West	Topography: **Flat land** Ecology: **No forest & Wildlife** Population: **1081** Economic Activities: **farming activities nearby**	**Risk:** The use of agrochemicals. **Mitigation:** Sensitize beneficiaries
2	Jarra Madina	Jarra East	Topography**: hilly land** Ecology**: No forest & Wildlife** Population**: 751** Economic Activities**: None**	
3	Bajana	Kiang West	Topography**: Flat land** Ecology**: No forest & Wildlife** Population: **553** Economic Activities**: none** However, there are cashew trees to the east of the identified land	
4	Joli	Kiang West	Topography: **Flat land** Ecology: **No forest & Wildlife** Population: **553** Economic Activities: **None** The identified land is far from the residential area and there is nearby Football field	**Risk:** Theft and vandalism because the facility is away from the residential area**.** **Mitigation:** Erection of guard post and hiring of a night watchman Sensitization of beneficiaries