



**THE REPUBLIC OF GAMBIA**



## **Gambia Climate Smart Rural WASH Development Project (CSRWASHDEP)**

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

#### **DRAFT REPORT**

**BY:**

**Dawda BADGIE**

**ESMF CONSULTANT**

**African Development Bank  
West Region Business Delivery Office (RDGW)**

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## LIST OF ACRONMYS

AfDB	African Development Bank
CRR	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
UN	United Nations
URR	Upper River Region
WASH	Water Supply, Sanitation and Hygiene
WB	World Bank
WCR	West Coast Region
WMC	Water Management Committee

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## EXECUTIVE SUMMARY

The Government of The Gambia and other development partners over the years has made considerable efforts in addressing water supply and sanitation related challenges across the country, there exists major gaps to be complete in this area particularly in rural areas. In accordance with the Gambia current National Development Plan provisions to improved equitable access to safe and affordable water supply and sanitation, good hygiene practices and environmental protection promoted for all the people across the country in this sector. The general aim of this project echoes the goal of the sector. The objectives of the proposed Gambia Climate Smart Rural WASH Development Project are to: (a) increase sustainable access to safe water and basic sanitation in rural and peri-urban areas; (b) enhance service delivery capacity; and (c) create opportunities for improved livelihoods, including youth employment, through community based water resources management from a climate change impact adaptation and mitigation perspective. Built on the suggestive resources, the project is envisaged to benefit a projected 500,000 rural and peri-urban citizens and consequently would lead to estimated increase safe water supply coverage of 16% and as well a minimum 5% increase in improved sanitation coverage. Furthermore, through the capacity enhancement programs, the project is expected to improved management of water resources, improved knowledge, attitudes and practices of the principal beneficiaries' thus better sector in general. The proposed CSRWASHDEP would targets about 144 communities in the five administrative regions of West Coast, Lower River, North Bank Central River and Upper River. The final selection of project intervention sites or localities will be based on key factors which include but not limited to the following; the current poverty level, population size, water point coverage, child mortality and incidence of water borne diseases associated with the locality identified. The Project has four core components: Water Supply and Sanitation Infrastructure, specific activities include the drilling of boreholes, water troughs for livestock and solid and liquid waste management infrastructure, 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, water resources management and livelihoods improvement whose specific activities include protection of groundwater resources, mitigating effects of floods and sustainable management of liquid and solid waste generated at seven fish landing sites and Project Management Unit that details arrangements for execution of the project. The methods applied to gather relevant and adequate information within the project intervention areas took a qualitative of data collection through consultation meetings with stakeholders. Relevant information about sites was collected and secondary data related to project activities as well field visits where necessary. The focus aimed at addressing the key environmental and social components of the project with respect to social and environmental ramifications during implementation. The findings reveals that positive impacts of the project among others would be through the provision of safe and quality portable water and suitable sanitation amenities would

reduce health risks from improved water sources and supply system thus subsequently improved livelihoods of the local communities and livestock. In addition, the construction phase could create employment opportunity, especially for the youths and also enhanced local economies. The project shall also capacities both institutions and communities on water resources management meant for sustainability of the facilities post project operations. The improvement in the waste management sector shall be significant in terms of environmental cleanness benefits resulting from communicable diseases resulting from waste related infection. Nonetheless, the activities such as trenching water system across communities could potentially impacts negatively on the environment and the social wellbeing of workers and local settlers on dust pollution, noise, erosion and emergency of STIs, HIV/AIDs, injuries and related occupational health issues over the short term. The activities of the project shall have insignificant destruction of fauna and flora in intervention areas. The overall anticipated negative environmental and social impacts during project implementation could be minimized and managed if the mitigation measures proposed are duly considered and adhered.



## 1 INTRODUCTION

### 1.1 Context

The Government of The Gambia has submitted a request to the African Development Bank, West Africa Business Delivery Office for funding a project aimed at (i) increasing access to potable water and basic sanitation in rural areas; (ii) create opportunities for improved livelihoods, including youth employment, through community based integrated water resources management that also addresses coastal protection.

The Government of The Gambia and other development partners over the years has made considerable efforts in addressing water supply and sanitation related challenges across the country, there exists major gaps to be complete in this area particularly in rural areas. Ironically, the Gambia is largely assumed to have met its Millennium Development Goals (MDG) targets in terms of water supply, however, indicators on the ground and the increasing number of applications received by Department of Water Resources (DWR) for water supply systems supports the fact that many people are still in need of safe water supply. With respect to sanitation, the country is still distant behind in achieving the MDGs. Some settlements have water supply systems but they do not meet the demand of all the people. Secondly, with the UN declaration of water as a human right, the country is now moving toward 100% coverage for all by 2020 in line with the Sustainable Development Goals (SDGs).

The proposed Gambia Climate Smart Rural WASH Development Project (CSRWASHDEP) targets about 144 communities in the five administrative regions of West Coast, Lower River, North Bank Central River and Upper River. The selection of project intervention sites or localities will be based on key factors which include but not limited to the following; the current poverty level, population size, water point coverage, child mortality and incidence of water borne diseases associated with the locality identified.

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 whose specific activities include protection of groundwater resources, mitigating effects of floods and sustainable management of liquid and solid waste generated at seven fish landing sites.
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.

The CSRWASHDEP Project intends to execute the following key activities among others as described briefly during the implementation cycle.

- I. **Rehabilitation and construction of new water supply and sanitation facilities in 145 rural and peri-urban communities** which will include drilled boreholes, solar powered pumping and reticulation systems, metered yard tap and street tap connections, watering racks for livestock. The sanitation facilities shall include household and public toilets, solid waste management aspect, provision of sanitation facilities in public institutions (schools, clinics and markets) where required and feasible.
- II. **Provision of Water Supply, Sanitation and Hygiene (WASH) Education at the community level** including training of trainers, sanitation and hygiene education and sensitization

- promotions, setting up and training of WASH committees for operations and maintenance, in addition to training of water supply and sanitation professionals.
- III. Support to enhance capacity for Integrated Water Resources Management (IWRM) and Related Services and strengthening of relevant sector institutions.
  - IV. Facilitating establishment of the Rural Water Supply and Sanitation Department (RWSD) as the lead agency for delivery of rural water supply and sanitation infrastructure and services. As well as provision of resources to finance to strengthen of the Rural Water Supply and Sanitation Department (RWSD) and other relevant institutions through development and use of hard and soft tools/amenities to enable effective sector management coordination and performance through training of national and local level stakeholders & beneficiaries on improved sanitation and hygiene practices.
  - V. Financing activities that enhance the learning of school children to improve their knowledge and skills in crop irrigation and production, production and use of solar and other renewable energy with reference to the constructed community solar powered water supply systems, and the impact of climate change on the aquatic environment.
  - VI. Provision of tools and amenities that enhance adaptation of water and waste management practices to climate change, particularly in the growth centres and peri urban and coastal communities
  - VII. Support protection of groundwater resources; mitigating the effect of floods; and sustainable management of solid and liquid wastes, and provision of climate smart infrastructure for fish processing and storage in the seven fish landing sites mainly located along The Gambian coastal line and river banks to protect the fragile marine ecosystem against climate change

## **1.2 The Purpose of the ESMF**

It is envisaged that any development project could have potential social and environmental impacts which may be of lesser magnitude or high as well as positive and negative for the beneficiary during implementation. The activities of the project are likely to generate potential negative impacts (physical, biological and social) including loss of vegetation and deforestation, soil erosion among others. In that respect that this Environmental and Social Management

Framework (ESMF) is being prepared as a requirement aimed at managing the potential risks that may arise from the implementation of the project with these key purposes:

1. Provides guidance to sub-borrowers (sub-project sponsors) to ensure the environment assessment process is carried out in compliance with national legislation and bank safeguards policies
2. Provides an environmental and social screening process to allow for identification, assessment and mitigation of potential impacts by proposed works at the time the detailed aspects are known
3. Used as a reference document for assessing the potential environmental and social impacts of investment alternatives
4. Serves as guidelines for the development of sub-project/site-specific Environmental Social Management Plans (ESMPs), Environmental Assessments (EAs), due diligence reports, environmental audits, among others
5. Is an integral part of the project Operational Manual and applicable to all Financial Institutions investments, regardless of its funding source or implementing agency

### **1.3 Objective and Rationale of the ESMF**

The objectives of the ESMF are mainly:

- i. Establish procedures for screening all proposed sub-projects for their potential adverse environmental and social impacts
- ii. Specify measures for managing, mitigating and monitoring environmental impacts during project operation
- iii. Outline training and capacity-building arrangements needed to implement the ESMF provisions

The rationale for preparing an ESMF for the CSRWASHDEP is essentially to evaluate the project's potential environmental and social risks and impacts in the areas or intervention sites selected for its implementation. The process of ESMF will examine ways of improving project site selection, planning, design, and implementation; it also attempts to prevent, minimize, mitigate, or compensate for adverse environmental impacts, and to enhance positive impacts throughout

project implementation. Whenever feasible, preventive measures are preferred over mitigation or compensatory measures.

The general framework for the assessment and management of environmental and social safeguards of developments/projects in the Gambia is provided in the National Environment Management Act (NEMA), 1994, and the EIA Guidelines and Procedures 1999, EIA Regulations 2014, SEA Policy 2017 – 2021 and SEA Guidelines 2016.

Consequently, the CSRWASHDEP being funded by the AfDB has to comply with the AfDB Integrated Safeguard System and its Operational Safeguard Requirement Standards. Furthermore, program based projects whose specific subproject sites are not yet identified or known would require development of an Environmental and Social Management Framework (ESMF) along with an Environmental and Social Management Plan. In addition, an ESMF is the required approach because implementation of the project as it serves as generic overview of the basic situation on the ground and subsequently paves way for site assessment specific intervention or sub project within the project objectives.

#### **1.4 Methodology in Developing the ESMF**

The approach used in the development of this ESMF is a combination of literature reviews, interviews and field visits to potential project sites. Literature reviewed included project designs and proposals similar to the CSRWASHDEP which has provided much insight into the potential positive and negative impacts of such projects to enable predictions with reasonable accuracy of the potential impacts of the CSRWASHDEP. Selected potential sites for the proposed CSRWASHDEP for water supply systems and sanitation enhancement were visited paying particular attention to the current water supply related issues, sanitation challenges, management systems and established measures for sustainability after project phase out. In addition, observation on physical and environmental characteristics of the various sites, including their respective development-environment situation and relationships were done.

In order to gather adequate information from project intervention sites and beneficiaries for the establishment of a baseline on environmental and social impacts for the project, initial field visits to selected potential project sites and beneficiaries were carried out from the 9<sup>th</sup> – 26<sup>th</sup> January, 2018. In total, 26 clusters communities for large systems and 2 village communities for mini- system were visited across the 5 administrative regions of The Gambia. The purpose of the

field visit was to observe, as much as possible, the bio-physical environment of the projects sites in the area concern in each region. The process was participatory, drawing on the local knowledge and involving the local people, also recognizing the relationship among resources, resource users, institutions, socio-economic and cultural setting. Relevant stakeholders met included village heads or “alkalos”, members of Village Development Committees (VDCs), women and youths.

Other institutions and stakeholders who are expected to play a major role in the project were consulted to determine their status of preparedness in implementing this ESMF. They included the National Environment Agency (NEA), DWR field officers, DCD, Regional Programme Officers (RPOs), persons met and the consultations is shown in Annex 1. Basically, the area of focus aimed at addressing the key environmental and social components of the project during the survey were mainly but not limited to:-

- Current water supply sources and issues of access
- Water management issues
- Environmental sanitation issues
- Environmental situation with respect to proposed project activities
- Dominant Socio-economic activities for the communities both men and women

## **2. INSTITUTIONAL, LEGAL AND REGULATORY FRAMEWORKS CONTEXT OF THE PROJECT**

This ESMF has been prepared in due consideration of the legal and regulatory framework governing environmental and social impact management of projects in The Gambia. These laws constitute the environmental legal instruments for managing projects in the country. The project will also be implemented with due consideration of relevant international regulations and conventions. The National Environmental Agency (NEA) is the principal environmental custodian or authority of the environmental matters in The Gambia. In order to ensure adherence to environmental principles, the following acts, policies and guidelines will be instrumental in the implementation of the Gambia Climate Smart Rural WASH Development Project (CSRWASHDEP). The stakeholder analysis of key institutions, legal and regulatory frameworks are summarized in Table 3.1 and 3.2 respectively,

## 2.1 Stakeholder Analysis of Key Institutions

INSTITUTION	MANDATE	INTEREST IN PROJECT	POSSIBLE ROLE IN PROJECT	
			Implementation of mitigation measures	monitoring
<b>National Environment Agency</b>	The NEA is mandated Gambia government Agency for ensuring compliance of projects with national environmental management laws	Project has the potential of generating negative environmental and social effects if proposed surveillance activities are not properly implemented.	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
<b>Ministry of Environment, Climate Change and Natural Resources</b>	This Ministry oversees implementation of the environment policies adopted by the National Environment Management Council (NEMC)	The Project in line with policy goals in the sound management of the environment and conservation of natural resources	The Ministry coopted in the monitoring to ensure adopted policies are in line with our national environmental laws	
<b>Department of Water Resources</b>	It is responsible for the assessment of periodic variation of the country's water resources, their use and for water resources planning.	The project in line with Gambia's water policies in ensuring the periodic assessment of water resources , use and water resource 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 intervention areas.	Potential contributor towards cost of implementation of the ESMP since this is not project's responsibility
<b>Ministry of Fisheries</b>	Statutorily mandated Gambia government institution responsible for the implementation of all water resources related projects	Project in line with policy goals, especially in the area of quality water supply and public sanitary enhancement.	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

<b>Local Government Authorities</b>	Regional authority within whose administrative area the project falls and a potential supporter in both project and post project era	Project compliments responsibilities to the beneficiaries	Potential contributor towards cost of sustainability of the project after implementation and life cycle in terms of technical and human resources as this would not be project's responsibility	
<b>Department of Health Services</b>	Project has implication on public health issues	Monitor and help in controlling public health issues relating to the project	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
<b>Beneficiaries communities</b>	communities to receive Project support in the water supply and public sanitary facilities	Project enhances livelihood of beneficiaries through enhanced water supply and public sanitation	<ul style="list-style-type: none"> <li>• in-kind contributions, especially free labor towards plan implementation</li> <li>• record keeping to aid monitoring program</li> </ul>	Provide relevant information during project monitoring
<b>Non-governmental Organizations:</b>	those organizations working with beneficiary communities in the area of food self-sufficiency and poverty alleviation	Project complements efforts in supporting farmers in area of self-sufficiency	<ul style="list-style-type: none"> <li>• share and provide expertise in the implementation of the mitigation and monitoring programs</li> <li>• share expertise and resources in building capacity of the beneficiaries</li> </ul>	

## 2.2 Legal & Regulatory Analysis of Project

Laws/ Regulations	Purpose of Regulations	Relevance to Project
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National Environment Management Act, 1994	It is the legal framework for the control and management of the environment and for matters connected therewith; under the purview of the National Environment Agency (NEA).	It is mandatory that all development projects undergo an EIA and CSRWASHDEP suits the large-scale agricultural development projects described in the Act.
Environmental Impact Assessment Regulations 2014	This legislations elaborate on the requirements of Part V of the NEMA, Act 1994	Its mandatory that all development projects undergo the EIA Process
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 ground water
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, 1990	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
The Fisheries Policy (2007)	The objective of this policy include 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	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.

	framework as the basis of biodiversity conservation, management and sustainable use; and etc.	
The National Health Policy - 2012-2020	This policy aims at contributing to the socioeconomic development and wealth creation of the country by promoting and protecting the health of the population through equitable provision of quality health care within the context of Primary Health Care	To promote and protect the health of the population and other health issues relating to the project
The Forest Policy (2009-2019)	This policy promotes the rational management of forest resources through active participation of rural population who are the immediate stakeholders.	The CSRWASHDEP is executed within the confines of this policy since the project deals directly with rural communities who interact with forest resources

## 2.3 Institutional Framework for Environmental Impact Assessment and ESMF Implementation

The NEA is the legally mandates as the custodian of the EIA process in the country. The Agency works closely with a multi-sectoral EIA Working Group comprising the public sector, private sector and civil society. The roles of the various stakeholders in the EIA process are as follows:

### The EIA Working Group

- Advises the NEA Executive Director on the approval or otherwise of environmental impact statements
- Undertakes scoping exercises, public consultations and the review of draft environmental impact statements that developers or proponents submit to the NEA for the Executive Director's approval in lieu of environmental clearance before project starts.

### The NEA

- Screens projects using the EIA Screening Forms
- Supports the EIA Working Group to conduct scoping of projects requiring EIA/ESIAs
- Develops the terms of reference for the subsequent environmental impact study

In addition it coordinates public consultations on draft environmental and social impact statements submitted to the NEA, the review of same are also its responsibility.

### **The Developer/Investor**

- Completes the EIA screening form
- Takes part in the scoping exercise
- Conducts the environmental and social impact study
- Submits the resultant environmental and social impact statement to the NEA for the consideration of the EIA Working Group and the public by means of public consultations or disclosure
- Implements that section of the impact statement on the remedial actions of the environmental management plan

In addition to the EIA and ANR Working Groups, the NEA has other cross-sector working groups that advise it and other government departments on specific environmental and natural resources issues as per their respective names. These include, among others:

- The Hazardous Chemicals and Pesticides Management Board
- The Environmental Quality Standards Working Group
- The Waste Management Working Group
- The Coastal Zone Management Working Group

## **2.4 African Development Bank Safeguards Policies**

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, 2013)**

The Bank has established an Integrated Safeguard System (ISS) for a 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) Involuntary Resettlement (2003)
- (v) Policy on Environment (2004)
- (vi) Gender Policy (2001)
- (vii) Integrated Water Resources Management (2000)

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,
- (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.

## **2.5 Summary**

There are indeed a considerable number of policies and legislations both national and international standards that deal with the environment, natural resources management and social

safeguards in general. The objective here is not to discuss all these policies and legislation but only those that are essential to guiding the sustainable implementation of this project which have been highlighted.

### **3. BRIEF DESCRIPTION OF PROJECT ACTIVITIES**

#### **3.1 Project Activities**

The project is intended to target 144 rural and peri-urban communities in several districts across the five administrative regions subject to confirmation of additional resources to what is available at present. The communities were selected based on their current poverty level, population size, water point coverage, child mortality, incidence of water borne diseases. The Project envisaged improving the potable water supply system in over 120 settlements across the entire country through activities briefly described below.

### **3.1.1 Rehabilitation of Existing Supply Systems**

Existing supply system in fourteen communities across the country, including four peri-urban settlements, will be upgraded as follows:

- Installation of a bigger overhead storage tank
- Replacement of existing pipe network and expanding the network to extended areas of the settlements (disposal of pipes and fittings)
- Replacement of current taps and extending taps to extended areas of the settlements (disposal of taps and fittings)

There is possibility to extend the activity to another seven settlements, increasing the beneficiaries to twenty-one communities. The average age of existing systems in these settlements is twenty-two years. The systems will be powered by solar, meaning existing power systems will also be upgraded as well. The average population size of the four peri-urban communities is 9695 people

### **3.1.2 Installation of new large solar pumping and distribution systems**

A total of forty settlements, across the country, are identified for the installation of a large solar-powered pumping and distribution system that comprises the following basic elements.

- Overhead storage tank
- Installation of pipe network across the entire settlement
- Connecting taps to the pipe network across the entire settlement

The average population size of the forty villages is 1,393.

### **3.1.3 Installation of new mini solar pumping and distribution system**

This entails the same activities in 3.1.2 above, but at a smaller scale in terms of tank capacity, in 65 rural communities across the country. There is possibility of additional 13 communities, increasing beneficiaries to 78. The average population size of these communities is 728 people.

#### **4, BRIEF DESCRIPTION OF PROJECT'S KEY ENVIRONMENTAL, SOCIAL AND CLIMATE CHANGE COMPONENTS**

##### **4.1 Physical Environment**

Location: The Project will be implemented in five districts within The Gambia





**Figure 1: Map of The Gambia and the Project Area.**

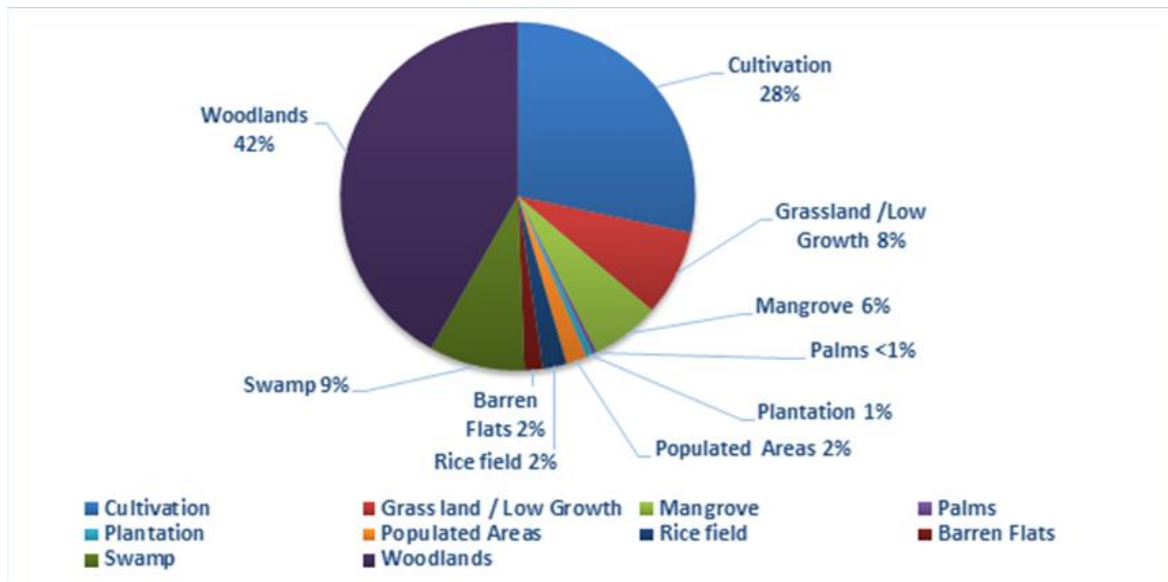
## 4.2 Climate Conditions

The climate of The Gambia is largely semi-arid and uniform across the country. There are two distinct seasons in the year; a rainy season from mid-June to early October and a dry season from mid-October to mid-June. Daily temperatures average 28.2°C across the country in the dry season and 28°C in the rainy season. The annual rainfall ranges from 850mm in the east to 1200mm along the coast (National Forest Assessment, 2008-2010).

## 4.3 Landscape Ecology Conditions

In 1946, woodlands that include mangroves covered an estimated 81% of the land area. By 2001, total woodland and mangrove area represented less than 50% of the land area. Closed forest, once the dominant woodland cover, is all but disappeared, and the remaining woodland has been reduced to single canopy woodland or grassland. The natural vegetation formations are classed into more woody Guinea woodland in the west and less woody Sudan savannah in the eastern part. Wetlands consisting of mangroves, barren flats, and freshwater swamps constitute 17% of total land area and the remaining 83% is under various Sudanian-Guinean woodland savannah formations. Over the last one hundred fifty years, the Gambia has experienced significant

transformation of the natural land cover as the result of a number of anthropogenic and natural factors such as: agricultural expansion, urban settlement, indiscriminate waste dumping and poor waste management, livestock rearing, wildfires. This is leading to increased climate variability including frequent and persistent droughts that are blamed for the change in Gambian land cover.



**Figure 1: The Composition of Gambia's Landscape in 2001: DoSLG & L, 2003**

#### **4.4. Water Resources:**

Water bodies which include fresh, surface and underground can be found throughout the Gambia although saline water can be found in some area. Good drinking water can be extracted from both the shallow and the deep aquifers in the country, however, domestic needs of water comes from the underground. In some communities, particularly in Peri-urban areas, the indiscriminate dumping of municipal waste along water ways, couple with poor municipal waste management condition could potentially lead to portable water contamination which may sometimes be used for domestic purpose. It is therefore prudent to consider the project activities and interactions in areas closed to water bodies.

#### **4.5. Wetlands:**

Wetlands are of international importance in the Gambia and the project sites will have to be screened for impacts on wetlands particularly those still not protected retain much of their original vegetation cover and associated species. However, it is important to mention that most of

the project potential sites visited are far from the wetland ecosystem therefore direct impacts of project activities to these areas is not anticipated.

#### **4.6 Geology and dominant soils:**

Soils in The Gambia are 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 cur across the regions.

#### **4.7 Climatic Condition and Agro- Agro ecology, Sahelian Zone**

The country has three major agro-climatic zones that are not distinct and generally combined in a single region.

**4.7.1 Sahelian Zone** - This zone is characterized by open dry season savannah vegetation dominated by shrubs and herbaceous vegetation. Annual rainfall is usually less than 600-mm and the effective length-of-growing-period (LGP) is less than 79 days; the soils generally have low water retention capacity and therefore, not very suitable for long-duration crops. The zone is mainly found across the northern strips of CRR-N and upper NBR where, especially CRR-N, the livestock population is high putting further pressure on the vegetation.

**4.7.2 Sudano-Sahelian Zone** - This zone has a longer LGP between 79 to 119 days and rainfall ranging from 600 to 900 mm rainfall area. The flood plains along The Gambia River and associated lowland valley systems, ideal for rice cultivation, are all characterized under this zone; it essentially covers most of the regions, lower middle NBR. Parts of this zone are also found in LRR and WCR of the Gambia River estuary and are affected by salt intrusion into adjoining low-lands at the peak of the dry season.

**4.7.3 Sudan-Guinean Zone** - The Sudan- Guinean Zone lies within the 900 to 1200 mm rainfall isohyets around the coastline and thus covers only the WCR and lower NBR. The vegetation is

dominated by gallery forests, mangroves and tree species covering a great part of the estuary as well. The growing season is 120-150 days and in normal seasons full crop water requirements are met throughout the growing season. The principal crops cultivated in this agro-ecology are early millet, groundnut, rice (rain-fed upland and lowland, irrigated lowland, salt-tolerant varieties), maize, vegetable, sesame and cowpea.

## **4.8 Socio-economic Environment**

The Gambia Climate Smart Rural WASH Development Project (CSRWASHDEP) intend to target communities that are mainly rural and peri-urban and largely dependent on rain-fed agriculture for both subsistence and income generation.

### ***4.8.1 Population, Ethnicity and Religion:***

The 2013 population census of The Gambia though not official published, the national population is estimated at 1.8 million (GBoS, 2013). The gender of the population stands at 51% female and 49% males; the growth rate of the population was then estimated at 2.8% per annum were based on the available data of 2003 Census. The ethnicity composed of mainly eight officially recognized groups; Mandingoes (36%), Fullani (22%), Wollofs (15%), Jolas (11%), Sarahuley (8), Serer (2.5%), Manjago (1.7%), Aku (0.8%) and others 4% (GBoS, 2003). In terms of religious affiliation, about 90% of the population are practicing Islam while the other constitutes 10% practice Christianity or traditional beliefs.

### ***4.8.2 Economy:***

According to the Human Development Report 2016, the MPI, which identifies multiple overlapping deprivations suffered by households in 3 dimensions: education, health and living standards for The Gambia referring to the most recent survey data that were refer to 2013 In Gambia, in which 57.2 % of the population (1,068,000) people are multidimensionally poor while an additional 21.3 % live near multidimensional poverty (398,000) people

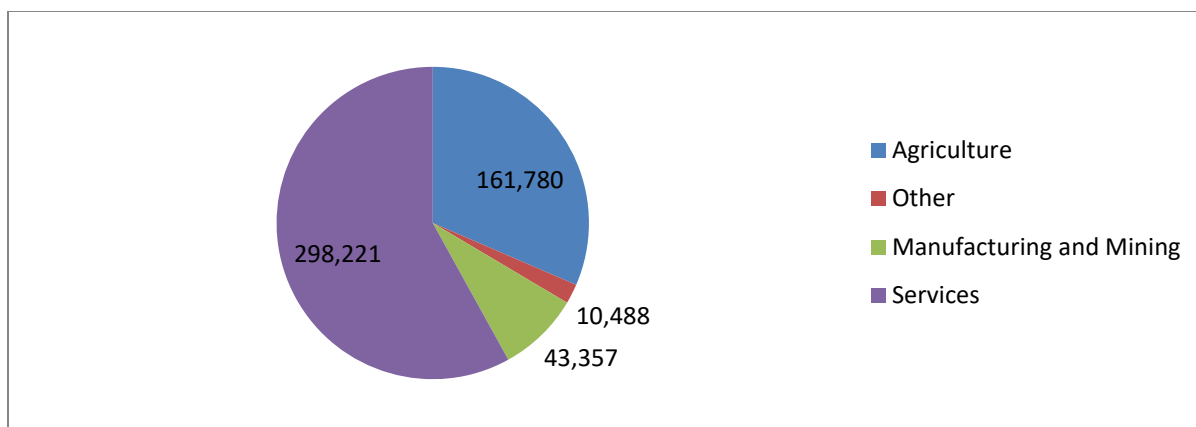
The Gambia has been classified amongst the poorest countries in the world (UNDP's HDI for 2015). This put the country in the low human development category and positioning it at 173 out of 188 countries and territories globally. With increasing population growth and with most rural population being a net purchaser of food, access to clean water and affordable becomes an important factor in these areas. A household poverty survey from 1992 to 2003/04 and 2010 has

indicated a similar trend of increasing pervasiveness rate of poverty in both urban and rural areas. However this trend is severe in rural population especially among the women folks who are in constant struggle to attain better livelihood. The project sites visited were mainly farmers who rely on their farm produce for economic gains. Due to the meager income from subsistence farming activities, most communities are unable to afford getting quality water supply for domestic use and livestock thus relying heavily on government intervention through projects like this and other individual support.

#### ***4.8.3 Employment:***

Primarily, agriculture dominates the employment sector in the Gambia; this area has been characterized by subsistence production of food crops comprising cereals (early millet, late millet, maize, sorghum and rice); semi-intensive cash crop production (groundnuts, cotton, sesame and horticulture) and traditional livestock. Mixed farming still remain the dominant practice of agriculture, although, greater percentage comes from crop production. At national level sectoral employment stood as thus: agriculture 75%, industry, commerce, and services 19%, government 6%

According to UNDP National Human Development Report 2014, about 40 % of the total population of The Gambia is economically active while a whopping 60 % are not economically active. This is mainly because large segments of the population are attending school, relatively young and family responsibility; accounting for 49.3 per cent of the inactive, 21.7 per cent and 11.5 per cent, respectively. The total number of employed persons in The Gambia according the report stood at 522,670 (71.1%) of the labour force while the unemployed persons number stood at 221,414 (28.9%) in 2012. There was a significant difference in male and female unemployment, with close to 20.9% and 38.3%, respectively.



**Figure x: Structure of Employment in The Gambia.** Source: The Gambia LFS 2012 in UNDP NHDPR, 2014

#### **4.8.4 Education:**

According to UNESCO for The Gambia, country has an adult literacy rate of 41.95%. While the male literacy rate is 51.42%, for females is 33.58%, showing a big gap between the sexes. Basic education has been recognized by The Government of The Gambia as a key to national development. To that effect, the government has embarked upon several educational reforms and instituted policy measures toward making education more accessible to all from primary to upper basic school. Access to education is also, largely, through public schools particularly in the rural regions. Notwithstanding, majorities of the beneficiaries across the five administrative regions are non-literate.

#### **4.8.5 Health:**

The health service delivery system in The Gambia is three tier based on the Primary Health Care Strategy. Currently, there are five hospitals across the country, six major health centres and thirty-two minor health facilities. At the primary (community) level 492 health posts exist. While health service provision is virtually free at the public health facilities, especially for women and children, proximity to major facilities still remains a problem for majority of the communities. The public service delivery is complemented by NGO and private run facilities. One of the goals of the health policy is to empower communities to be active partners in managing both their physical health and health services.

#### ***4.8.6 Land Tenure:***

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 are 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.

#### ***4.8.7 Water and Sanitation:***

Theoretically, the Joint Management Program (JMP) updates at the launch of the successor Sustainable Development Goals (MDG) initiative, indicated that The Gambia met its MDG target for water with 90% of its population (94% urban and 84% rural) estimated as being covered with improved water sources in 2015. However, the country did not make sufficient progress towards improving sanitation – only 59% of the population (55% rural and 65% urban) was estimated to be using improved sanitation facilities by 2015, while only 2% of the rural homesteads had evidence of handwashing with soap.

#### ***4.8.8 Gender:***

Apparently, the female population dominates in all regions of project communities; however, the project focus is to increase sustainable access to safe water and basic sanitation in rural and peri-urban areas among others which is traditionally a female area in the Gambia. Women generally dominate both the lowland and horticulture production in most communities visited. Half of the economic active female population in most of the communities engaged hugely in crop production while male counter parts engaged mainly in cash crop production

## 5. KEY ENVIRONMENTAL AND SOCIAL IMPACTS

Developments entail changes in the economic, social and environmental aspects to the local affected communities. Whilst developments are seen to bring about positive changes, if the requisite care is not taken, unlikely and adverse effects of the developments will be precipitated by the project's activities. There is need to prevent the occurrences of unfavourable effects of a project so as to enhance the sustainability of resources and the environment, which is the primary concern in order to meet the needs of today's and future generations.

The 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 played a role in the process as consultations were held at various levels, from the communities government officials at the national level, and downwards with leaderships communities and village development communities local levels. The views gathered during this consultative process have been incorporated in the preparation of this report. The identified impacts are categorised into positive and negative impacts that will arise from the project implementation processes.

### 5.1. Location and sensitivity potential project status

The structural and infrastructural developments Gambia Climate Smart Rural WASH Development Project (CSRWASHDEP) or its rehabilitation of existing infrastructures expansions will not be undertaken in fragile or legally protected or ecologically sensitive areas. The project activities will be carried out on the land or sites that would be collectively identified by the benefitting communities and may have been abandoned either because one reason or the other. All envisage activities at the potential sites will be those that have minimum or short-lived negative environmental impacts such as localised installation of water pumps. Such installations will not include extensive land excavations and construction works.



## Range of likely impacts

### 5.2.1 The direct positive impacts

The direct positive impacts of the project will include:

- (i) **Reduced health risks from improved water sources and supply system:** Improved water supply for the communities will invariably improve their health condition in terms having clean water for domestics and livestock use.
- (ii) Improved water supply infrastructures hence reduced health risks and enhance durable quality water supply system subsequently improved livelihoods of the local communities. and livestock
- (iii) Reduce drudgery, social tension and conflict among communities resulting from water shortages for humans and livestock.
- (iv) **Enhance environmental sanitation:** Sanitation at rural communities is to greater extent a concern for the government and development partners. The planned intervention of the project interns of improving sanitation infrastructure at local level shall enhance their living standards thus reducing communicable diseases.
- (v) **Enhanced Livestock water Supplies:** Improved livestock water supplies due to increased water access..
- (vi) **Employment Opportunities:** Employment opportunities will arise due to increased recruitment of local labour to be involved in the project works and agricultural production activities as well as in the agricultural and livestock value chain activities.
- (vii) **Improved Infrastructure:** The project will result in improved infrastructure due to expansion of the rural water supply facilities.
- (viii) **Capacity Building:** Direct capacity building programmes will enhance the knowledge base of the technical officers of various government institutions and local communities hence enhancing their skills and knowledge resulting in improved service delivery and work performance.

### 5.2.2. The direct negative impacts

The Gambia Climate Smart Rural WASH Development Project (CSRWASHDEP) is likely to generate negative impacts during its implementation. These negative impacts will stem from a number of activities in the infrastructure development and related rehabilitation works. Activities that generate negative impacts in the infrastructure component include: and (i) development and construction water system networks, (ii) development and construction of sanitation facilities. The operational phase of the project is also likely to contribute negative impacts such as pollution arising from the use of fertilizers and other agro-chemicals

- i. **Loss of vegetation:** There is anticipated increase in clearing of few vegetation through the process of water system networking particularly in clusters communities that are far apart. The project areas are mostly characterized by sparsely grassland vegetation and the trenches would avoid roads and place in the edges which could be vegetated. The cutting of indigenous trees may interfere with some cultural values of the local communities as some trees have medicinal value and have been used for treatment purposes.
- ii. **Soil Compaction and destabilisation of the geological balance:** The possible use of heavy machineries and increased traffic during the construction work for 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 and subsequently gully formation. It may also affect soil-water balance and the general hydrological cycle.
- iii. **Pollution; Dust, water, noise and Air Quality Concerns:** The construction activities mostly the excavation of the construction materials are likely to generate a significant amount of dust which may be blown by the wind and construction vehicles. Construction vehicles and other machinery could emit smoke and fumes from engines leading to air pollution. The dust and the fumes when inhaled could lead to adverse effects to residents, especially to young children. Oil spills and grease from the construction vehicles and machinery have the potential to pollute soil and other water sources and the vegetation. Noise pollution emanating from construction vehicles, other machinery and workers will have a great significant negative impact on humans, livestock, and wild animals.

- iv. **Land acquisition for facilities:** This is likely to be the most significant adverse impact of the project program. It includes permanent land acquisition for construction of infrastructure and temporary access to land.
- v. **Generation of wastes:** The generation of solid wastes resulting from the implementation of subproject work activities. This could be both common municipal waste resulting from workers and petty trading activities and also construction waste from the rehabilitation of old water systems such as pipe networks among others could have negative impacts unless properly managed.
- vi. **Possible accidents and occupational hazards:** - Implementation of the program will definitely increase volume of human and motor traffic in the program 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 program 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 working gear for program workers including the helmets, overalls, boots and gloves.
- vii. **Disruption of free movement:** *The trenching of pipes*, would potentially pass through streets and might lead to temporary blocking of the areas. People and livestock free movement could be disturbed over the short term thus affecting their wellbeing momentarily.
- viii. **Transmission of HIV/AIDs and other diseases:** The prevalence of HIV/AIDS in the area could increase due to free-flow and high influx of people as migrant workers particularly during the construction phase of the project. The influx of people into the project areas may potentially result in increased infections of diseases, particularly HIV/AIDS. During project implementation activities such trade and employment are also likely to increase hence increased interactions consequently leading to increased infections. In addition, water and vector borne diseases are commonly associated stagnant water that may arise at water points if not properly managed by the benefitting communities. The diseases most directly associated with stagnant water are malaria, bilharzia (schistosomiasis) and river blindness (onchocerciasis), whose vectors proliferate in the non-moving waters.

### 5.3. Social and economic impacts

### **5.3.1. Negative socio-economic impacts**

The construction work may lead to immigration of new people who may come to seek employment who might bring with them socially transmitted diseases including HIV/AIDS and other communicable diseases due to social interactions.

### **5.3.2. Positive social and economic impacts**

A number of positive social and economic impacts have been identified and include: (i) direct employment in the construction sites for both skilled and unskilled workers from among the community members; (ii) increased income hence improved socio-economic status.

### **5.3.3 Overall impact of the Project**

The Project satisfies category B of NEMA, 1994 as it poses largely insignificant negative impacts to both the socioeconomic and biophysical environments. The most significant negative impact is associated with water system pipe network during the construction phase; the associated trenches will pose injury risks, especially to children and domestic animals. The trenches could also fragment farmlands as stated in the previous section. The wastage of water either from faulty tap heads or from children to leaking pipes was one common issue identified across all communities during the consultations. Apparently, this is sure to be an issue during the operational phase of the Project and a major negative impact that needs to be addressed fully.

The Project is, overall, positive for both the socio-economic and biophysical environments. No cumulative impacts are foreseen and the negative impacts of injury risks and wastage of water are easily manageable to safe and beneficial levels.

## 5.4 Enhancement & Mitigation Program

### 5.4.1 Summary of Impacts

Table 4.1 below provides a summary of the positive and negative impacts of the project and their respective enhancement and mitigation measures.

**Table 5.1: enchantment and mitigation measures**

No.	Component	Parameters to be monitored	Frequency/Responsibility
1	<i>Air quality, GHG and noise</i>	<ul style="list-style-type: none"> <li>Vehicle and Equipment Maintenance plan implementation;</li> <li>Grievances recorded</li> </ul>	Throughout the construction phase by Contractors/Project engineers
2	<i>Water resources</i>	<ul style="list-style-type: none"> <li>EHSP/waste management plan;</li> <li>Spill prevention and control plan/EHSP;</li> <li>Construction site management plan; and</li> <li>Periodic reports on performance by contractor to project engineers</li> <li>Oil Spill prevention and control plan</li> <li>Hazardous material management plan</li> <li>Water accidents/incidents recorded.</li> <li>Integrated Pest Management Plan</li> </ul>	<ul style="list-style-type: none"> <li>Daily self-checks by contractors;</li> <li>Spot checks/audits by project engineers.</li> </ul> <p>During construction and operation phases</p>
3	<i>Land and Soils</i>	<ul style="list-style-type: none"> <li>Erosion control and restoration plan</li> <li>waste management plan</li> <li>Construction site management plan</li> <li>Number of Site Waste Bins</li> <li>Final Disposal Records</li> <li>Periodic reports</li> </ul>	<p>Daily Self Checks and Weekly checks by Project Engineers</p> <p>Throughout the project implementation</p>
4	<i>Waste Generation &amp; Disposal</i>	<ul style="list-style-type: none"> <li>Waste management plans</li> <li>Number of Site Waste Bins</li> <li>Final Disposal Records</li> <li>Segregation of waste</li> </ul>	<p>Weekly Checks by Project Engineers/Contractors</p> <p>Throughout the project implementation</p>
5	<i>Public and Occupational health and safety hazards</i>	<ul style="list-style-type: none"> <li>EHSP</li> <li>Health and Safety/Pesticide Incidents Register</li> <li>Construction site management plan</li> <li>Fencing of construction sites and marked with high visibility</li> <li>Contractor periodic reports</li> <li>Danger warning signs</li> <li>EHS training records</li> <li>Vector Borne Disease Incidences</li> <li>Use of Protective Wear</li> <li>Community Sensitisation on significant threats of water canals and water harvesting facilities</li> </ul>	<p>Daily self-checks and Monthly verifications by project engineers</p> <p>During construction and operation</p>
6	<i>Biodiversity</i>	<ul style="list-style-type: none"> <li>Areas cleared for construction and operation activities</li> <li>Biodiversity and habitat screening before construction</li> </ul>	<p>Regular checks by contractor</p> <p>During Construction and operation</p>

No.	Component	Parameters to be monitored	Frequency/Responsibility
		<ul style="list-style-type: none"> <li>Fauna observation reports for impacts of agrochemicals</li> <li>Rehabilitation records</li> </ul>	
7	<i>Resource Efficiency</i>	Water resources management plan Energy Efficiency Plans GHG reduction plans	Weekly Checks by project engineers During construction
8	<i>HIV/Aids Programs</i>	<ul style="list-style-type: none"> <li>HIV/AIDS awareness &amp; training records</li> </ul>	Preconstruction/Construction Contractors
9	<i>Social Conflicts</i>	<ul style="list-style-type: none"> <li>Grievances and complaints recorded</li> <li>Number of social conflicts recorded</li> </ul>	Throughout the project cycle MoFA/SADA
10	<i>Loss of land</i>	<ul style="list-style-type: none"> <li>Land Acquisition Plan and Records</li> <li>Compensation and Relocation Assistance records</li> <li>Livelihoods Restoration Plan</li> <li>Complaints recorded and addressed</li> </ul>	Pre-construction/ construction phase MoFA/SADA
11	<i>Gender</i>	<ul style="list-style-type: none"> <li>No of Women benefiting from credit facility</li> <li>Number of women employed within project activities</li> <li>Number of women extension workers</li> <li>Number of women attending training</li> </ul>	Construction and operation phases MoFA, SADA, Contractors
12	<i>Social/Cultural</i>	<ul style="list-style-type: none"> <li>Cultural/Archaeological sites encountered</li> <li>Chance Find procedures</li> </ul>	Daily self-checks and verification by contractors Preconstruction/construction and post construction

## 5.4.2 Details of Enhancement/Mitigation Measures & Complimentary Initiatives

Brief description of mitigation and enhancement measures for the key significant direct impacts of the project are described as follow and summarized in the Table 5.2..

### 5.4.2.1 Establishment water use management committees

Village development committees exist in all communities visited as an umbrella body for the coordination of development activities usually through the set-up of sub-committees for

various developments. It is hereby proposed as a precondition to intervention that all beneficiary VDCs establish a subcommittee on water use, and related facilities, management. The responsibilities of the subcommittee will include ensuring that facilities are well-maintained.

#### **5.4.2.2 Education on water-borne diseases**

Perhaps malaria is the most common water-borne related disease in all the communities. It is hoped that educating the communities on the positive contribution of stagnant water around taps to malaria will a long way towards improving the control of the disease, and others like it.

#### **5.4.2.3 Basic training on maintenance of infrastructure**

Burst pipes and faulty tap heads were noted to be the significant contributors towards the wastage of water. A number of times, these repairs do not require the services of skilled personnel thus we recommend a selection of youths, male and female, be trained on these basic skills as part of contractual agreements with related contractors.

#### **5.4.2.4 Introduction of compulsory savings scheme**

It is understood that contract agreements will have *defects liability periods* during which replacement and/or repair of damaged infrastructure shall be the responsibility of the Contractor. It is also understood that these will not include damage deemed to be a result of mishandling by beneficiaries. In view of the latter, a compulsory contribution and savings scheme will ensure the community hires skilled services on its own without Project's intervention.

#### **5.4.2.5 Prioritise hiring of local youths by contractors**

It is a common practice that Contractors hire a very high percentage of their workers, both skilled and unskilled, from outside the beneficiary communities. The lack of opportunity for employment aside, this also creates some form of local detachment from the works. Therefore,

entrenching the hire of locals, especially for all unskilled works, will not only give employment but also enhance the local ownership of the completed works.

### **5.4. 3 Details of mitigation measures**

#### **5.4.3.1 Bury pipes as trenching goes**

The health risks of open trenches will be high the longer they stay opened. Therefore, Contractors should be made to have all supplies of pipes on-site before the start of trenching in order to have the pipes laid with trenching, hence greatly reducing the risks.

#### **5.4.3.2 Seal off open trenches with reflective tapes**

It can be possible that the laying of pipes will not catch up with trenching hence open trenches will still be a common thing during the construction period. In such cases, sealing off the trenches with shiny tape, visible at night as well, will greatly reduce the risks of the trenches to both humans and domestic animals.

#### **5.4.3.3 Sensitise communities on dangers of open trenches**

Usually signs are not enough in deterring people such that even where the dug-outs are sealed off with shiny tape, there will still be the possibility of negligence and vandalism. Therefore, the Contractor, in partnership with the regional staff of DWR, should sensitise communities on the dangers of the open trenches to both people and animals.

#### **5.4.3.5 Assign responsibilities of taps to individual volunteers**

Having volunteers watching over taps, especially in small communities could prove positively vital in enhancing the lives of the street taps. The responsibilities will include ensuring the taps are opened, and closed, as scheduled and controlling access by children who are more likely to. This could work well if the street taps are positioned at compound gates and getting a



volunteer from the nearest compound to the tap. The institutional arrangements for implementing the measures is detailed in section 9 where roles are largely defined by the institutions' statutory mandates and how they relate to each measure.

#### **5.4.3.5 Climate Change Risks and Adaptation Measures**

Climate Change events have had an adverse impact on the aquatic environment and WASH sector in The Gambia in many different ways. Such climate variability is being translated into negative impacts on drinking water availability and quality besides exacerbating the risks associated with lack of access to improved sanitation, including faecal and solid waste management. On the other hand, the increasing frequency and magnitude of floods, due to abnormally excessive rainfall events, leads to rapid and wide spread of water borne and other infectious diseases in the absence of improved sanitation facilities. The flooding of rudimentary latrines and water wells, coupled with flood deposits of indiscriminately/unsafely disposed solid waste from households and health facilities, especially in peri-urban areas/rural growth centres, is a primary driver for the rapid and extensive spread of infectious diseases. The project has incorporated the following climate adaptation and mitigation measures: ensuring environmental flow for rivers/lakes; establishing sustainable water management systems, using IWRM practices; reduction of GHG emissions by ensuring well serviced machinery is used and proper processing facilities are in place for waste management; capacity building of local communities to adopt IWRM and Climate smart technologies; and installation of clean energy solar pumps.

**Table 5.2: Mitigation Enhancement Measures (MEM)**

Impact	Mitigation and Enhancement Measures
<b>Water and land resources</b>	
<ul style="list-style-type: none"> <li>- Reduced health risks from improved water source and supply system</li> </ul>	<ul style="list-style-type: none"> <li>✓ establishment of water use management committees</li> <li>✓ sensitise on water-borne diseases and institute proper hygiene</li> </ul>
<ul style="list-style-type: none"> <li>- Possible unnecessary pumping of groundwater.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Regulate pumped water volumes in line with the aquifer refill.</li> </ul>
<ul style="list-style-type: none"> <li>- Water pollution and Soil contamination by spilling of hazardous materials.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Maintain vehicles, machinery and equipment in good condition in order to avoid leaks and spill of hazardous materials pesticides and related chemicals</li> <li>✓ Ensure a safe management of hazardous materials</li> <li>✓ Take all precautions during the refuelling of vehicles and machinery, and forbid the refuelling near water bodies.</li> <li>✓ Plan emergency response measures in case of accidental spill for clean-up and decontamination.</li> <li>✓ Enclose areas to limit access to the system except by authorized person</li> <li>✓</li> </ul>
<ul style="list-style-type: none"> <li>- Runoff erosion &amp; sedimentation problems.</li> <li>- Change in the local topography.</li> <li>- Landslides &amp; other types of soil movements in the works areas</li> </ul>	<ul style="list-style-type: none"> <li>✓ Avoid areas sensitive to erosion during trenching.</li> <li>✓ Carry out the construction works in the dry season.</li> <li>✓ Favour the establishment of water supply infrastructures on low-productive soils.</li> <li>✓ Limit the circulation of heavy machinery to minimal areas.</li> <li>✓ Avoid establishing access roads along steep slopes; instead, locate</li> </ul>

Impact	Mitigation and Enhancement Measures
	<p>access roads perpendicularly or diagonally to the slope.</p> <p>✓ Consult local communities on the run situation in their various place for informed decision</p>
<ul style="list-style-type: none"> <li>- Reduction of soil fertility.</li> <li>- Soil destabilisation as a result of excavation.</li> </ul>	<p>✓ Stabilise the soils in order to reduce potential erosion.</p> <p>✓ Levelling off the soils and vegetation re-generation post construction.</p>
<ul style="list-style-type: none"> <li>- Encroachment into ecologically sensitive and protected areas.</li> <li>- Draining of wetlands.</li> <li>- Reduction of the biodiversity.</li> </ul>	<p>✓ Design the water conveyance layout by taking into account ecologically and traditional sensitive and protected areas such as graves, shrines etc.</p> <p>✓ Establish a perimeter of protection around sensitive ecosystems such as wetlands and unique habitats sheltering endangered species where necessary.</p> <p>✓ Minimise the length of work in ecologically sensitive areas.</p> <p>✓ Minimise the water conveyance layout in forest land.</p> <p>✓ Avoid crossing wetlands and protected areas.</p>
<b>Flora</b>	
<ul style="list-style-type: none"> <li>- Destruction of the vegetation cover.</li> <li>- Decrease in the vegetation development that could enhance desertification.</li> </ul>	<p>✓ Control land clearing in affected areas.</p> <p>✓ Protect trees from machinery along right-of-way.</p> <p>✓ Restore the vegetation in cleared areas.</p> <p>✓ Ensure the plantation of indigenous species are avoided</p> <p>✓ Support and promote the development of community initiatives in for afforestation</p>
<b>Natural and cultural heritage</b>	
<ul style="list-style-type: none"> <li>- Change in, encroachment, destruction or degradation of sites of cultural, archaeological or historical importance.</li> </ul>	<p>✓ Carry out an archaeological survey of the project area.</p> <p>✓ In case of discovery of any areas of cultural, archaeological or historical importance, protect the concerned areas during construction and contact the relevant authorities.</p> <p>✓ Consult communities for informed decision</p>
<b>Air quality</b>	
<ul style="list-style-type: none"> <li>- Degradation of air quality by dust and vehicles emissions.</li> <li>- Increase in ambient noise.</li> </ul>	<p>✓ Periodic Sprinkling of water to reduce dust during construction</p> <p>✓ Install and operate air pollution control equipment particularly for heavy machine.</p> <p>✓ Within and near the residential areas, avoid noisy works after regular working hours.</p> <p>✓ Keep vehicles and machinery in good condition in order to minimise gas, noise and dust emissions.</p> <p>✓ Use appropriate means for minimising dust dispersion during construction.</p> <p>✓ Use dust and noise attenuators, such as vegetation edges along transport corridors in order to minimise noise and the aerial transport of dust.</p>
<b>Social and Economic Issues</b>	

Impact	Mitigation and Enhancement Measures
<ul style="list-style-type: none"> <li>- Increase in local development and employment.</li> <li>- Difficulties for water suppliers to meet profitability objectives.</li> <li>- Exclusion of specific groups from water facilities benefits.</li> <li>- Disruption of other activities,</li> </ul>	<ul style="list-style-type: none"> <li>✓ Consideration be made to local employment and local inputs where humanly applicable.</li> <li>✓ Identify why specific groups are not benefiting from the program and adopt corrective measures as required.</li> <li>✓ Ensure that the poor and other vulnerable groups can continue to safely satisfy their basic water needs.</li> <li>✓ Take into account the population's capacity to pay when determining user fees.</li> <li>✓ Offer alternative income opportunities to those having a limited access to or losing productive means.</li> </ul>
<b>Access to infrastructures &amp; services</b>	
<ul style="list-style-type: none"> <li>- Better access to drinking water.</li> <li>- Increased water demand leading to insufficient supply to satisfy drinking water needs.</li> <li>- Unreliable water service and/or quality.</li> <li>- Inadequate water storage facilities causing water contamination.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Ensure adequate water supply for addressing the basic needs of the host and migrant populations.</li> <li>✓ Develop alternative supply options to remedy in case for service failures.</li> <li>✓ Involve the population (men and women) in the management of new and improved services to ensure their sustainability.</li> <li>✓ Implement water fees/ tariffs to maintain a good quality and constant service level.</li> <li>✓ Establish quality control for water supply and storage facilities.</li> </ul>
<b>Quality of life</b>	
<ul style="list-style-type: none"> <li>- Improvement in standard of living.</li> <li>- Disturbance of quality of life due to nuisances (noise, dust &amp; traffic) during construction works.</li> <li>- Degradation of the landscape by land clearing, construction works, new infrastructures, etc.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Involve the communities in the maintenance and management of new infrastructures to ensure their sustainability.</li> <li>✓ Provide information and education on monitoring and maintaining water supply systems, particularly for ensuring water quality preservation.</li> <li>✓ Empower Village Development Committees and local leadership to ensure sustainability of the project</li> </ul>
<b>Information, education and communication</b>	
<ul style="list-style-type: none"> <li>- Exclusion of specific groups from the water management processes due to a lack of knowledge.</li> <li>- Development of skills in water conservation and management.</li> <li>- Lack of awareness on the importance of hygiene at water points.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Support certain individuals who may lack the capacity to participate in water management processes.</li> <li>✓ Provide water suppliers, men and women, with the training required to preserve water resources and to maintain regular water supply.</li> <li>✓ Ensure that social services provide education to men and women on appropriate hygienic conditions and water conservation, taking into consideration gender particular roles and responsibilities.</li> <li>✓ Inform the local population on potential program benefits for the community and identify individual behaviours that would contribute to achieve those benefits.</li> </ul>
<b>Communicable diseases</b>	
<p>Changes in exposure to:</p> <ul style="list-style-type: none"> <li>✓ Water borne diseases e.g.: diarrhoea</li> </ul>	<ul style="list-style-type: none"> <li>✓ Facilitate the implementation of appropriate latrines and other sanitation facilities.</li> </ul>

Impact	Mitigation and Enhancement Measures
<p>and cholera associated with contamination, intermittency and poor sanitation.</p> <ul style="list-style-type: none"> <li>✓Water related diseases e.g.: malaria, filariasis, dengue associated with drainage, storage and wastewater disposal.</li> <li>✓Water contact diseases e.g.: schistosomiasis and swimmer's itch associated with impoundment.</li> <li>✓Water washed diseases e.g.: scabies and skin infections associated with insufficient supply.</li> <li>✓Sexually transmitted infections e.g.: HIV/AIDS associated with migration, construction, economic change.</li> </ul>	<ul style="list-style-type: none"> <li>✓Information, education and communication about safe uses of drinking water.</li> <li>✓Environmental management for vector control; contact</li> <li>✓avoidance via settlement location and design and use of</li> <li>✓bed nets and repellents; rapid diagnosis and treatment;</li> <li>✓Focal insecticide application; covered water storage; reduced domestic storage; functional drainage.</li> <li>✓Strengthen medical services to ensure rapid diagnosis and treatment.</li> <li>✓Safe water and food storage and handling.</li> <li>✓Implement HIV/AIDS prophylaxis through appropriate health promotion as well as wide distribution and use of condoms (for men and women); employment opportunities for program-affected women; provision of family accommodation for construction workers.</li> <li>✓Assure continuous supply.</li> <li>✓Avoid using contaminated groundwater and unauthorized connections.</li> <li>✓Avoid contamination via runoff and contamination of collection and storage equipment.</li> <li>✓Train communities in pump maintenance.</li> <li>✓Ensure piped supply is accompanied by appropriate drainage and disposal.</li> <li>✓Survey community opinion about taste of water and water collection preferences.</li> <li>✓Refer to measures proposed under environment and poverty crosscutting themes as they address many health determinants of communicable diseases.</li> </ul>
<b>Non communicable diseases</b>	
<ul style="list-style-type: none"> <li>- Possible Poisoning associated with excess chemicals such as chlorine during neutralisation</li> </ul>	<ul style="list-style-type: none"> <li>✓Monitor water quality and adjust chemical content as appropriate.</li> </ul>
<b>Injuries</b>	
<ul style="list-style-type: none"> <li>- Potential risk of accidents on working sites and roads due to increased traffic.</li> <li>- Occupational related injuries.</li> </ul>	<ul style="list-style-type: none"> <li>✓Develop, communicate and implement safety and preventive measures for the population (such as traffic calming devices).</li> <li>✓Control access to working sites &amp; install and maintain appropriate signage.</li> <li>✓Develop an emergency preparedness plan, communicate it to workers, the community and all involved and conduct simulation exercises.</li> <li>✓Insist on the use of PPEs at all times during operations</li> </ul>
<b>Natural resources and land management</b>	
<ul style="list-style-type: none"> <li>- Disturbance of land and water uses, which can lead to social conflicts including rivalry associated with incompatible uses upstream and downstream of the water abstraction points.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Coordinate work with other land users avoid conflicts.</li> <li>✓ Clearly define water rights in consultation with affected communities.</li> <li>✓ Create water supply system management committees.</li> <li>✓ Build on the respective knowledge and experience of women and men in water management.</li> </ul>

Impact	Mitigation and Enhancement Measures
<ul style="list-style-type: none"> <li>- Sustainable management of water resources including conservation</li> <li>- Loss of or limited access to territory for some groups, particularly farmers and livestock herders.</li> <li>- Reduction in the quantity of water available for other uses.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Restore productive lands into initial conditions.</li> <li>✓ Ensure that water user fees and conditions are determined in consultations and well understood by all program beneficiaries.</li> <li>✓ Plan water intake according to available water resources.</li> <li>✓ Implement appropriate methods for water distribution.</li> </ul>
<b>Migration and resettlement</b>	
<ul style="list-style-type: none"> <li>- Decreased standard of living for involuntarily displaced people (not very likely).</li> </ul>	<ul style="list-style-type: none"> <li>✓ Escape private land and where impossible follow the ADB Resettlement policy and ESAP for guidance where necessary before project implementation.</li> </ul>

## 6. ESMF Monitoring Programme

### 6.1 Purpose

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 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).

## **6.2 Monitoring schedules**

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 split into two; surveillance and monitoring, the former dealing with the continuous surveying of the *construction phase* to ensure measures thereto are implemented while the latter deals with measures during the

implementation of the project. The program for each that defines, responsibilities, frequency of monitoring, data collection methods etc. are presented in sections below and further elaborated in monitoring plans in Tables 6.1 and 6.2. First a summary of impacts and respective measures for the each phase that will require monitoring

### **6.3 Responsibility for monitoring**

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.

### **6.4 Monitoring method**

The measures recommended, whether for enhancement or mitigation, all involve some form of physical interventions in the field. In this regard, 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.

### **6.5 Frequency of monitoring**

An effective surveillance will require the *Contractors* supply works plans for the various construction works that should be shared with field offices mentioned in 6.2 above. The said offices should then draw up frequency based pace of works such that possibility of subsequent visits generating new information will be high; bi-weekly visits are recommended. The EIA team's visits during the operations phase will be largely determined by the agreed timeframe for the implementation of the enhancement and mitigation measures. However, experience from similar projects has shown that quarterly visits have worked well and is therefore recommended for the operations phase.

### **6.6 Reporting**

Reporting responsibilities should go along with responsibilities for monitoring as in subsection 5.1 above; a reporting templates are given in Annex I for both surveillance and the periodic monitoring



in the operation phase. The reports should be submitted to both the Project Director and the Executive Director of NEA while they remain the property of the Project.

#### **6.7 Decision making**

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 EMC will be set up for such decisions; we however recommend the current legal provisions be applied that gives such powers to the Executive Director of the NEA.

**Table 6.1 Surveillance or Monitoring Schedules**

No.	Aspects to be Monitored	Project Phase (construction, operational & maintenance)	Location	Monitoring Indicators	Frequency of Monitoring	Institution/Agency to Monitor both internal and external
01	Development of site-specific ESMPs	Construction	Project sites	<ul style="list-style-type: none"> <li>❖ Site specific ESMPs developed and implemented</li> <li>❖ Adherence to laid down legal and policy requirements</li> </ul>	Once	MoFWR/PMU/ Contractor(s) and NEA/EIAWG
02	Environmental conditions during the irrigation infrastructure development <ul style="list-style-type: none"> <li>▪ Status of the biological conditions</li> <li>▪ Assessing the status of the physical works</li> <li>▪ Follow up on mitigation measures</li> </ul> Assess effectiveness of environmental and social measures adopted	Construction and operational phases	Project sites	<ul style="list-style-type: none"> <li>❖ Number of meetings planned and held;</li> <li>❖ Record of meetings that took place</li> <li>❖ Mission reports</li> </ul>	Monthly/annually	MoF&WR/PMU /NEA/ EIA Working group
03	Environmental conditions during the market infrastructure development and operations <ul style="list-style-type: none"> <li>▪ Status of the biological conditions</li> <li>▪ Assessing the status of the physical works</li> <li>▪ Follow up on mitigation measures</li> <li>▪ Assess effectiveness of environmental and social measures adopted</li> </ul>	Construction and operational phase	Project sites	<ul style="list-style-type: none"> <li>❖ Number of meetings planned and held;</li> <li>❖ Record of meetings that took place</li> <li>❖ Mission reports</li> </ul>	Monthly/annually	MoF&WR/PMU /NEA/EIA Working group

No.	Aspects to be Monitored	Project Phase (construction,	Location	Monitoring Indicators	Frequency of Monitoring	Institution/Agency to Monitor
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		<b>operational &amp; maintenance</b>				
04	Water management and conservation and management programmes <ul style="list-style-type: none"> <li>▪ Status of the biological conditions</li> <li>▪ Assessing the status of the physical works</li> <li>▪ Follow up on mitigation measures</li> <li>▪ Assess effectiveness of environmental and social measures adopted</li> </ul>	Project implementation phase	Project sites	<ul style="list-style-type: none"> <li>❖ Water quality supply, turbidity/ suspended solids ;</li> <li>❖ Number of area with improves Sanitation condition</li> </ul>	Annually	MoF&WR/PMU/NEA/Working group
05	Environmental conditions during the rural access roads/infrastructure development <ul style="list-style-type: none"> <li>▪ Status of the biological conditions</li> <li>▪ Assessing the status of the physical works</li> <li>▪ Follow up on mitigation measures</li> <li>▪ Assess effectiveness of environmental and social measures adopted</li> </ul>	Construction and implementation phases	Project sites	<ul style="list-style-type: none"> <li>❖ Number of areas cleared</li> <li>❖ Numbers of rehabilitation carried out</li> </ul>	Monthly/Six monthly and annually depending on the phase of the project	MoF&WR/PMU/NEA/Working group
06	Institutional strengthening and capacity building	All	Targeted institutions Identified individuals	Training reports	Annually	MoF&WR/PMU/NEA/Working group

**Table 6.2 Monitoring plan**

<b>Mitigation Measures</b>	<b>Responsibility for Monitoring</b>	<b>Monitoring frequency</b>	<b>Monitoring timeframe</b>	<b>Monitoring Indicators</b>	<b>Budget (USD)</b>
Development & Implementation of site specific ESMPs	NEA AND EIA Technical working group	Monthly	Throughout the Project Cycle	-# of ESMPs developed ESMP -Quarterly ESMP Progress reports	<b>4,000</b>
Avoid and minimise Involuntary Resettlement	NEA/DPPH/LGA/DOA/ Local Communities	Monthly	Throughout the project Cycle	-No. of farmlands avoided -Land Acquisition/Compensation records	<b>4,000</b>
Re-vegetation (In case some vegetation cut during pipe laying)	LGA/ DOF	Quarterly	During clearance/ After the installation	Area/no of trees that has been re- planted	<b>15,000</b>
Noise Pollution	NEA, PMU, Contractor	Weekly (visit to sites) Contractor	During all phases of works	-Number of complaints received - Quarterly Progress Reports	<b>Included in Project Costs</b>
Air Quality Impacts	NEA, PMU, Contractor	Weekly by Contractor	During all project phases	-Vehicle/Equipment maintenance records -Number of Complaints received	<b>Included in Project Costs</b>
Land and Soil Degradation	NEA, PIU, Contractor	Weekly	Throughout the Project Cycle	-Erosion Control measures -rehabilitation records e.g. compaction of trenches	<b>Included in Project Costs</b>
Water Resources Degradation	NEA/PIU/Contractors	Weekly	Throughout the	-Water Resources Management plans -Water Quality Assessment records -Oil spill prevention measures in place	<b>Included in the Project Costs</b>
Waste Management/ Pollution	NEA/ LGA	Weekly	Throughout the project cycle	-waste management plans -Waste Management Records	<b>4,000</b>
All construction and domestic waste collected, stored and disposed of properly	NEA	Daily by contractor,/ MKAC	During all phases of works	Collection and disposal records  No. of reports on the process  No. of illegal dump sites	<b>4,000</b>
Public Health and Safety including HIV/AIDS and communicable & vector borne diseases	Contractor supervisors, NEA, DWR (PMU)	Daily by contractor  (Site Manager)	During all phases works	-Public Safety Signage/ Awareness records -# of accidents recorded -Disease incidences -HIV/AIDs training/awareness records	<b>2,000</b>
EHS and Labour Conditions for workers	Contractor/supervisors/NEA/	Weekly	During the works	-EHS Plans -Provision of PPEs	<b>30,000</b>

and Code of Conduct for Construction Workers to ensure Appropriate Behaviour	PMU			- EHS training/awareness records -HR Policy and contracts for workers -Code of Conduct for workers on E & S issues	
Social Conflicts and Conflict with Communities	PMU, CONTRACTOR	Monthly	During the PROJECT CYCLE	-Code of Conduct for Workers - Number of grievances on conflicts with contractors	<b>9,000</b>
Over all ESMP Monitoring activities	NEA / DWR / PMUMoF, LGAs etc..	Weekly	During the project implementation	-No of ESMP monitoring reports -ESMPs reviewed	<b>60,000</b>
Local Community Employment	NEA/ PMU & Contractor(s) )MoFWRNAM	As required	During Project implementation	No. of local staff employed	
Gender		Monthly	During Project Implementation	# of women employed # of women participating in project activities	<b>Included in Project costs</b>
Socio-cultural Impacts	NEA/DWR/LGAs/Local Leaders	Weekly	During Project Implementation	-number of cultural sites impacted -Chance finds records	<b>Included in Project Costs</b>

## 7. PUBLIC CONSULTATIONS

During the preparation of this ESMF, public consultations were carried out with the relevant stakeholders and respective beneficiary communities. Meetings were held with members of the regional offices technical officers in the field and local leadership across the regions. The consultation started from 09<sup>th</sup> – 26<sup>th</sup> January, 2018 to all regional administrative across the Gambia. In consultation covered twenty six cluster communities for large system and two small systems from the West Coast to the Upper River Regions of the country. In WCR, Tamba kunda, Siwol, Kusami & Kaimo cluster) Kampassa Cluster and Kapa communities were visited, in NBR, Ndofan & Kerr Wally Cluster, Jamma Synian Cluster, Jarekaw Wolof, Fula and Walalan cluster, Mbapa Cluster, communities were visited, in CRR, Balanghar complex, Madina Njuri cluster, and Jamali cluster were covered while in URR Diabugu, Hella Kunda & Afia Cluster, Kisikisi & Tinkinjo cluster, Sare Demba Toro & Sare Yorroyel cluster, Sare Gubo cluster and Baraji kunda communities were visited.

### 7.1 Rationale

The purpose of consultations was: (i) to generate a good understanding of the project by all stakeholders; (ii) to enhance ownership of the project by potential local beneficiary, t; (iii) to understand people's and expectations about the project visa planned works ; (iv) to understand and characterise potential environmental, social impacts of the project; (v) to enhance local benefits that may accrue from the project; and (vi) to enable stakeholders involved in the project to provide views, hence participating in or refining project designs. In addition, site-specific investigations were also conducted to gain insight to the likely impacts of the programme on the environment. In some cases personalised individual discussions were also conducted. Further consultations with stakeholders will be carried out during the subsequent phases of the project as well as during the preparation of site-specific environmental and social assessments as per the environmental regulatory requirements. The views and comments of the public have been incorporated, to the extent possible and are likely to influence the design as well as the locations of the proposed projects and infrastructure development.

During the meetings main issues raised included: (i) current water sources issues, (ii) water management at local level, (iii) possible environmental and social impacts and water sources in view of the changes in climatic conditions; (iv) anticipated long term benefits of the project; (v) the need for consultations and agreements of community members with regard to the development programme. The list of consultees and details of consultations are provided in annexes A and B to this report.

## 7.2 Stakeholder engagement program

### 7.2.1 Brief description of measures that require beneficiary engagement

The following enchantment and mitigation measures require the central participation of the beneficiary communities if they are to be successfully implemented.

1. **Establishment of water use management committee:** the consultations should focus on the importance of such a committee, citing examples of success stories from other communities. At the end of the consultation, there should be agreement on the roles and the Committee as well as criteria for its membership.
2. **Sensitisation 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. By the end of the consultative meeting, there should be signs that the communities are willing to tackle the problem of water wastage not only from the taps and burst pipes but from domestic applications of water.
3. **Basic training on maintenance of infrastructure:** this has a strong bearing on #2 above because during the consultations for this ESMP a considerable number of leaking pipes were observed that could be basically repaired but are instead neglected. This consultation 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 identifying volunteers who would be trained and the modalities of identifying such people.
4. **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.

5. **Assigning individual care to street taps:** 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 meetings. The consultation should focus on the selection criteria, roles of the individuals and, not the least, their relationship with the WMC. The selection of individuals should be entirely left to the communities.
6. **Engagement in Land acquisition:** Proper communities engagement on land acquisition may be required throughout the implementation period to avoid potential conflict among communities during implementation process

#### 7.2.2 Identification of stakeholders and other partners

It is clear from subsection 8.2.1 that an interest in the consultations is beyond that of the target groups of beneficiaries alone. For instance, the consultations on water-borne diseases will only bear the desired outcome with the participation of personnel from the Ministry of Health. As proposed earlier, the *trainings on basic maintenance of infrastructure* should be conducted by the relevant *Contractors* and as such the latter should be present at these consultations to, among others, clarify issues that may arise. The Project's management should therefore identify every relevant stakeholder and partner, including NGOs, and invite them to the consultative meetings.

#### 7.2.3 Stakeholder engagement methods

It is recommended that all stakeholder engagements be in the form of community-level meetings where, as much as possible, communities are met individually and not brought together.



From experience, bringing communities together goes with competing interests and issues are hardly comprehensively discussed.

**Table 7.1: Communication Action Plan**

Addressed topics	Targets	Managers	Tools	Period
Sensitization on environmental and social stakeholders related to the works	Population local population, Local Authorities	Environment, health and safety managers/ NEA –RPO LGA/ DWR	Radios talks	Before start of works and once every three months
Sensitization on generation and management of waste	Company personnel	Environment manager / NEA – RPO/LGA	HSE	Quarterly
Information and sensitization on trenching safety	Site personnel Population	Health & Safety managers/ Contractor	Radio talks	Before start of works and every three months
Sensitization on STIs and HIV/ AIDS	Site personnel Populations	/DOH/NAS Health & Safety managers/	Radio talks, posters and leaflets	Before start of works and Quarterly during works
Information and sensitization on rules and regulations	Site personnel	Environment, health and safety managers	Radio Talks, site briefing of workers	Before start of works and every three weeks
Communication with local population about the reconversion of some fields to serves as sites for the installation	Local population	Environment manager, NEA-RPO/ LGA of all regions	Radio Talks/ FGD,	Completion of exploitation of each quarry and borrow pit
Engagement in Land acquisition	Local population	PMT, LGA, DLS,NEA	Consultation	Before start of the commencement of the project

### 7.3 Grievance redress process

It should be expected that grievances could arise in the implementation of the measures at the community level. Therefore, the following mechanism is proposed to redress any grievance or complaint that may arise.

1. Set up a grievance redress committee easily accessible to the beneficiaries; the composition needs to be discussed between the Project team and the beneficiaries
2. Sensitise the beneficiaries on the existence of the Committee and its roles, how to contact the Committee and register grievances
3. The following process should be followed in receiving and responding to grievances
  - i. the grievance is received by Chairperson of the Committee and recorded in a grievance register
  - ii. the Chairperson summons a meeting within seven calendar days of receiving the grievance, inviting the representative of the Project in the Region
  - iii. if the Committee agrees to an immediate action to satisfy the complainant, the latter shall be briefed by the Chairperson of the remedial action and how it will be implemented
  - iv. for a corrective action that requires a longer period, again the Chairperson will inform the complainant of the action and proposed timeline for correction
  - v. in either 'iii' or 'iv' above, the Chairperson get written satisfaction from the Complainant on the action taken and formally close the case in the Register.

## 8. COMPLEMENTARY INITIATIVES

The Ministry of Fisheries and Water Resources is the executing agency of the project while the National Environmental Agency mandated by law to monitor compliance of safeguards in partnership with and other key sector with respect to safeguards implementation. The project is envisaged to complement the relationship between the MoF, NEA, the key stakeholders and other relevant departments in water, environment and natural resources management. The project will have a capacity building sub-component that will target to train the key officers involved in the

project on various aspects of environmental management especially environmental assessment and in understanding the importance of ESMPs

In general, complimentary initiatives in ESMF implementation is essential in ensuring that the project environmental or social performance by examining that the recommended mitigation measures have been carried out effectively in a timely manner through the involvement all necessary stakeholders. Collective efforts in terms monitoring also helps in evaluating whether the measures recommended are adequate in preventing, reducing or compensating the identified negative impacts and as well enhancing the positive impacts. Efficiency of those responsible for the ESMP implementation and the proposed structures should also be reviewed and the necessary changes made accordingly. The main issues to be monitored include activities that have been earlier identified to have potential significant negative impacts on environmental and socio-economic parameters, and corresponding mitigation.

At national level, the Project Management Unit (DWR), Contractors, MoF and the NEA with other key stakeholder's institutions have the monitoring responsibilities. NEA takes the lead in overall monitoring role of the ESMF implementation. Notwithstanding, the beneficiaries within project influence zones and general public also have monitoring roles by reporting issues to the NEA for addressing. Sensitisation on the ESMF before the Project commencement shall ensure consistency in understanding roles and responsibilities of each stakeholder.

It is the responsibility of the Project Management Unit to ensure that all involved stakeholders are facilitated to develop and monitor the ESMF implementation based on the Plan.

Monitoring Programme for the ESMF Implementation and associated Cost is presented in Table 7.1.

**Table 8.1: Monitoring Programme for the ESMF Implementation and Associated Cost**

<b>Mitigation Measures</b>	<b>Responsibility for Monitoring</b>	<b>Monitoring frequency</b>	<b>Monitoring timeframe</b>	<b>Monitoring Indicators</b>	<b>Budget (USD)</b>
<b>DURING WORKS ON THE PROJECT SITES</b>					
Locate sites for facilities	NEA AND EIA Technical working group	Once, or as required	Preparation stage for construction	Facilities located away from the private of sensitive areas	<b>4,000</b>
Avoid and Minimise land take on farmlands	NEA/DPPH/LGA/DOA/ DLS	As above	As above	No. of farmlands avoided	<b>4,000</b>
Re-vegetation (In case some vegetation cut during pipe laying)	LGA/ DOF	Quarterly	After the installation	Area/no of trees that has been re-planted	<b>15,000</b>
Machines used to only working hours to reduce noise	NEA, PMU, Contractor	Weekly (visit to sites) Contract or	During all phases of works	Number of complaints received	0
Prepare a waste management	NEA/ LGA	Weekly	At start of Project	Waste management guide	<b>4,000</b>

plan				available	
All construction and domestic waste collected, stored and disposed of properly	NEA	Daily by contractor, / MKAC	During all phases of works	Collecti on and disposal records  No. of reports on the process  No. of illegal dump sites	<b>4,000</b>
Raise public awareness on the project activities and issues of HIV/AIDs and other communicable diseases; and this includes local community Leaders involvement and participation	Contractor supervisors, NEA, DWR (PMU)	Daily by contractor (Site Manager)	During all phases works	No. of safety signs put up  No. of non-Project related people sighted in the Project area No. of accidents to the public recorded	<b>20,00</b>
Provide safety information, training and protection for workers and development of a Code of Conduct for Construction Workers to ensure Appropriate Behaviour	Contractor/supe rviso rs/NEA/ PMU	Monthly	During the works	No. of sensitizatio n activities programm es, carried out	<b>9,000</b>
Constant supervision and	PMU, CONTRACTO	Quarterly	During the PROJECT CYCLE	No. of training sessions	<b>30,000</b>

development of a Code of Conduct for Construction Workers to ensure Appropriate Behaviour	R			conducted No. staff accidents recorded No. of reports on the process	
Over all ESMP Monitoring activities	NEA / DWR / PMUMoF, LGAs etc..	Weekly	During the works	No. of recorded accidents and oils spills	<b>60,000</b>
Employ local community members and Local communities concerned should also be involved to ensure transparency and accountability	NEA/ PMU & Contractor(s) MoFWRNAM	As required	During Project implementation	Quarterly monitoring carried out	<b>0</b>
				No. of local staff employed	

## 9 Institutional Responsibilities, Arrangements and Capacity Building

### 9.1 Institutional responsibilities

The successful implementation of the enhancement, and mitigation, measures as well as the monitoring program requires partnerships and collaboration among all stakeholders that could be categorised as follows. The roles of each category of institution are defined below.

### 9.2 Government Institutions

The implementation of project activities is expected to lie with the DWR. Government institutions need to participate in the Project as per their mandates. For example, the possible role of NEA in monitoring is already cited. Another key partner is the Department of Community

Development (DCD) that will be instrumental in the set-up of community institutions such as the water management committee (WMC), especially in the area of capacity building. In short, the roles of government institutions in any project activity should be largely defined by their statutory mandates. Table 10.1 provides a stakeholder analysis of the Project with focus on those deemed to be key partners.

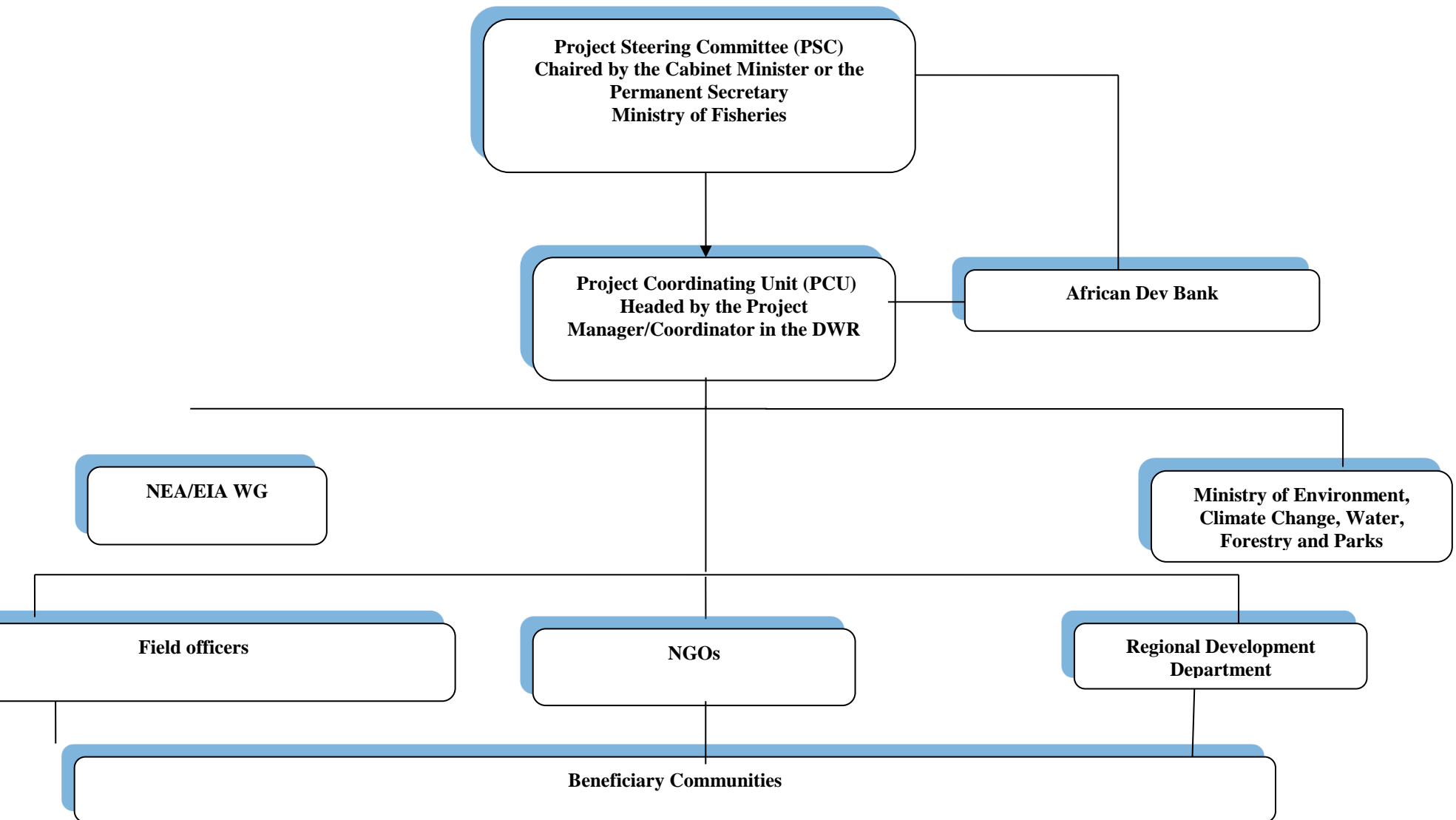
### **9.3 NGOs**

There are NGOs in the water management sectors and there are NGOs in the area of capacity building that is core to this project. Other matters core to the project includes gender, health and sanitation issues to mention a few. NGOs are particularly helpful in capacity building and sensitisation but more so in the latter and the Project should therefore seek partnerships, especially with NGOs that have presence in the Regions.

### **9.4 Community institutions**

The focus here is on the VDCs and MDFTs that are government-instituted bodies for the coordination of development support at the community level. These are entry points at community level and the establishment of any Project-related at that level such as Water Management Committees depends largely on their cooperation thus making them central to the Project's success.

**Figure 4: INSTITUTIONAL ARRANGEMENT AND CAPACITY BUILDING**







**Table .9.1: stakeholder analysis – key institutions only**

STAKEHOLDER	RESPONSIBILITIES
Ministry of Fisheries, Water resources and National Assembly Matters	<ul style="list-style-type: none"> <li>○ The lead Ministry with responsibility for overall coordination, creating an enabling environment for the project implementation with interventions of all stakeholders in the different sectors and regions and monitoring sanitation standards in households, schools and public facilities.</li> <li>○ Enforce policies and legislations to promote improved sanitation and proper hygiene practices are address during implementation</li> <li>○ Ensures proper and successfully implementation of the project and be accountable for any eventualities on behalf of Government of the Gambia</li> </ul>
Department of Water Resources	<ul style="list-style-type: none"> <li>○ In consultation with the Ministry , develop and implement policies for the national water resources management</li> <li>○ In partnership with the development partners, implement programs to provide potable water supply systems and improve sanitation in the rural communities</li> <li>○ Assist village communities in the management of their water supply systems</li> <li>○ Conduct water quality monitoring country wide</li> <li>○ Manage and run the water quality laboratory in Abuko</li> <li>○ Provide technical advice and guidance for groundwater extraction in the Gambia.</li> </ul>
National Environment Agency (NEA)/ EIAWG	<ul style="list-style-type: none"> <li>○ Enforce the National Environmental Management act and related legislations and guidelines</li> <li>○ Implement policies and legislations on environmental management and standards</li> <li>○ Conduct thorough regulatory instruments and enforce legal standards for effluent and waste disposals</li> <li>○ Implement environmental education &amp; conservation programmes</li> <li>○ Monitor, identify and control the importation and use of toxic and hazardous materials to the public and the environment</li> <li>○ Conduct trainings on environmental enhancement measures</li> </ul>
Local Government Authorities (LGA)	<ul style="list-style-type: none"> <li>○ Supervise the implementation of the Local Government Act at local level</li> <li>○ Enforce legal regulations on land administration and use at regional level</li> <li>○ Enforce physical planning regulations and housing developments</li> <li>○ Support project and collaborate with other development partners to improve service deliveries community</li> </ul>
Department of Community Development (DCD)	<ul style="list-style-type: none"> <li>○ In collaboration with the project shall support the formation and strengthening of community institutions for better management and sustainability of development interventions</li> <li>○ Work as partner with the communities to identify problems and develop/apply possible solutions</li> <li>○ Establish and implement an Appropriate Technology to build and strengthen the community skills</li> <li>○ Conduct community sensitization for effective participation to enhance ownership and sustainability of the project</li> <li>○ Training of community artisans on low-cost latrine construction</li> </ul>
Contractors	<ul style="list-style-type: none"> <li>○ To executive the implementation of the project</li> <li>○ To implement the ESMP by developing a construction environmental and social management plan during Construction</li> <li>○ To ensure that they comply with E &amp; S contractual clauses and compliance standards (national &amp; international)</li> </ul>
Local Communities (Project Beneficiaries)	<ul style="list-style-type: none"> <li>○ Participate in the development of site-specific ESMP development</li> <li>○ ensure that the ESMF and site specific ESMPs are successfully implemented</li> <li>○ Monitor the construction activities in relation to ESMP implementation</li> </ul>
NGOs	<ul style="list-style-type: none"> <li>○ Collaborate with Governments to ensure effectives implementation of development project across the country.</li> </ul>
AfDB Bank	<ul style="list-style-type: none"> <li>○ To provide financial support to the project</li> </ul>

STAKEHOLDER	RESPONSIBILITIES
	<ul style="list-style-type: none"> <li>○ To provide technical and supervisory support on implementation of ESMF and Site specific ESMPs &amp; Compliance with AfDB E &amp; S requirements</li> <li>○ Ensure timely reporting on E &amp; S performance quarterly reports</li> <li>○ To monitor through supervision missions and review E &amp; S Performance Reports submitted by the Client</li> </ul>

## 9.5 Institutional Arrangements

The manner institutions involved with the Project interact plays a major role in ensuring activities are effectively and efficiently managed and implemented. A body must be identified that will coordinate among institutions including those at the community level in addition to ensuring that other Project protocols, such as reporting, are adhered to. Therefore, in addition to the PIU, it is recommended to set up a Project Board as well as a Technical Committee. Proposed institutions are described below; figure 1 charts the relationship.

### 9.5.1 Project Implementation Unit

This unit shall be responsible for the day implementation of activities by following approved annual work plans that it prepared. It shall be under the direct supervision of the Director, DWR. The Unit's responsibilities shall include reporting on progress of project activities as well as enhancement and mitigation measures; the reports should be updated monthly for the Director and quarterly for the Project Board. It shall also be responsible for the formulation of contracts of various works for the signature of the Director. Not the least, it shall be central coordinating unit for the involvement all other parties in project activities in addition to defining their responsibilities. The core shall include *Project Manager*, *Monitoring & Evaluation Officer* (at least two considering the nationwide coverage of the Project) and *Finance Officer*.

### 9.5.2 Project Steering Committee or Board

This shall be the decision-making body of the Project and is, therefore, proposed to be constituted by heads of Ministries and regulatory institutions such as the NEA. The PS MoFWR&NAM should be Chairperson of the body. Its roles shall include approval of annual work

plans and budgets, reviewing and agreeing to partnership proposals that may arise as the project progresses and, not the least, visit field activities in at least once a year.

### 9.5.3 Technical Committee

The Project's focus on improving water supply qualifies it as an infrastructure development project and will, therefore, be dealing with contractual matters. Its involvement in sanitation also means involving highly with sensitisation. In essence, the PIU will be dealing with matters that will be outside the qualifications and experience of the staff hence requiring outside technical assistance. The composition of the group can best be defined when Project activities are fully defined. However, with sanitation in mind, a technician from the Department of Health Services is vital in the Committee to advise the PIU on matters such as the development sensitisation materials.

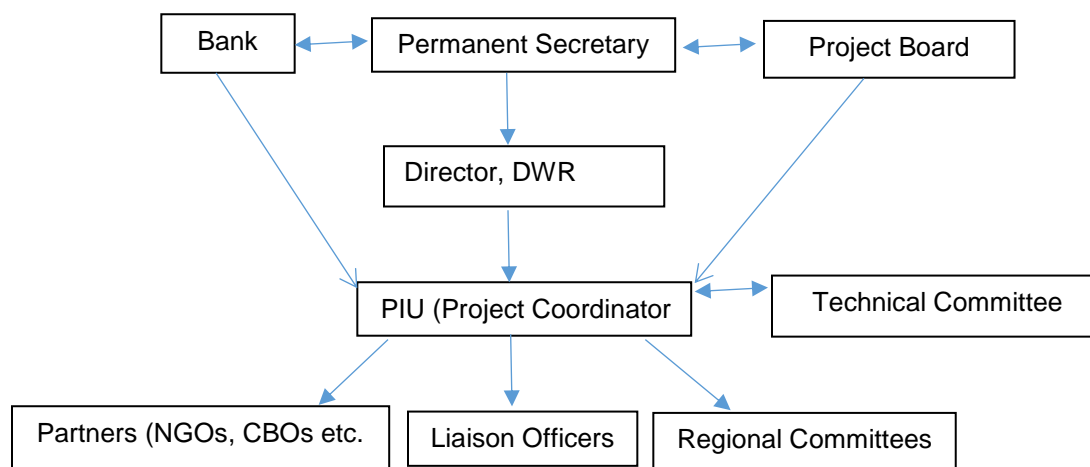
### 9.5.4 Regional Committees

The Project activities are largely uniform across the country. This means that project issues at community level will be very similar. For efficiency in dealing with these issues, it is advisable to set up *Committees* in each Region representative of all the beneficiaries. This body should meet quarterly at the *Regional* headquarters with the participation of the Project Coordinator. This arrangement will not deprecate the regular monitoring by M & E Officers and project liaisons but giving opportunity to the PMU to be abreast with matters without being regularly in the field.

### 9.5.5 Project liaisons

The PIU will be stationed at Banjul thus very far project locations in NBR (ferry crossing), LRR, CRR, URR and parts of WCR. Occasions will surely arise where the beneficiaries will require the urgent attention of the PC or the latter may require some urgent information for the

former. Such occasions will only be best addressed by project liaison officers in each Region and we recommend the current DWR regional officers for this role.



**Figure 3: proposed institutional arrangement for the Project**

## 10. Cost Estimation for Implementation of the ESMF

The total indicative financing for the project is currently stands UA 26 million (GMD 1,792million) to be financed as follows: ADF Grant of UA 2.8 million (11%); Transition SupportFacility (TSF) Grant of UA 2.5 million (10%); Rural Water Supply and Sanitation Initiative (RWSSI) Trust Fund Grant of UA 1.7 million (7%), GEF LCDF Grant of UA 6.2 million (24%); Adaptation Fund Grant of UA 6.7 million (26%); GCF Grant of 5.7(22%); KOAFEC Trust Fund Grant of UA 0.5 million (2%). The indicative budget estimate for successful implementation of ESMF/ESMP provisions over the project cycle is required. To ensure that the mitigation measures in the ESMF/ESMP are fully implemented, training, capacity building of personnel and partners institutions and sensitisation on the issues that are essential to the project in addition to

constant monitoring over the project cycle. Total cost of the ESMF implementation is indicated in Table 10.1

**Table 10.1: ESTIMATED COSTS OF THE ESMF IMPLEMENTATION AND MONITORING**

No.	Activity	Timeframe	Cost (US\$)	Responsibility
1	Preparation of site-specific ESMP/ESIAs	Quarter 1 prior to actual project works	15,000	MoF/NEA
2	<b>Complementary initiatives:</b>			
	<ul style="list-style-type: none"> <li>Capacity Building of Technical officers – environmental matters</li> </ul>	Quarter 1 & 2 of project implementation	15,000	MoF/NEA
	<ul style="list-style-type: none"> <li>Capacity building of Health related issues</li> </ul>	Quarter 2 of project commencement	10,000	MoF/Public Health Workers
	<ul style="list-style-type: none"> <li>Water management technical committees</li> <li>Sanitary trainings</li> <li>Water resources management</li> </ul>	Quarter 2 & 3 of project implementation Quarter 3 & 4 of project implementation Quarter 2 & 3 of project implementation	5,000 5,000 2,500	MoF
3	<b>ESMP/ESMP Monitoring</b>			NEA
	<ul style="list-style-type: none"> <li>Regular supervisions – environmental aspects</li> </ul>	Entire project period until hand-over	60,000	MoF/NEA /EIA WG
	<ul style="list-style-type: none"> <li>Institutional strengthening towards development of the ESMPs trainings at the the Technical Advisory Committee and local level structure and how to implement and monitor them</li> </ul>	Quarter 1 prior to actual project works	40,000	NEA/DWR
	<ul style="list-style-type: none"> <li>Mobility regular quarterly monitoring and Supervisions (vehicle and Motorcycles)</li> </ul>	At the start of the project	50,000	
	<ul style="list-style-type: none"> <li>Control missions</li> </ul>	Annually during project period	50,000	AfDB
4	Capacity building and general public awareness water resources management and operational skills to selected community memebers	As and when needed	30,000	PMU/MoF
5	HIV/AIDS Mainstreaming and other water borne related diseases	Quarterly campaigns	25,000	PMU MoF/ DOH
	Total		307,500	
6	5% Administrative Cost for ESMF implementation		15,875	NEA
7	<b>Grand Total</b>		<b>322, 875</b>	

## **11. Implementation Schedule and Reporting**

The proposed CSRWASDEP will be implemented over a 5 year period and the Department Water Resources (DWR) through PMU quarterly basis. The DWR through PMU on an annual basis shall send auditing reports regarding compliance with all aspects of the ESMP requirements. Any variations to the ESMF that lessens any mitigation and monitoring shall be done with in consultation with NEA and in accordance with the AfDB requirements. Detailed description of elements of environmental monitoring aspects of the project activities. The Ministries of Fisheries and the Environment are mainly responsible for monitoring through DWR which plays the role of Client's Representative and NEA is responsible for all environmental aspect of the project.

### **11.1 Company/Contractor**

The contractor who is charged with implementation shall effectively adhere to the mitigation measures of negative environmental impacts if not eliminate them. The environmental officer should be responsible for the managing interactions between stakeholders within the site. He/she shall also be in charge of relations with public especially on environmental and social issues with stakeholder institutions.

#### **11.1.1 The Project manager/Director**

He/ She shall be in charge with controlling the compliance of the application of environmental measures. He/she is co-manager with the quality and environment officer in the project areas where applicable. In case of environmental damage, he/she shall engage his/her responsibility. So, He/ she will have to ensure the effective implementation of the ESMF and in collaboration with local technical services, NGOs and local authorities.

#### **11.1.2 Client's representative**

DWR hinges on the National Environment Agency expertise through its responsibility to ensure performance of the implementation plan of environmental and social safeguards measures is working for environmental surveillance and monitoring on site. The NEA will consult with DWR as the main client on any issues of environmental and social concern during project implementation.

#### **11.1.3 Sensitization & Monitoring**



Sensitization activities for employees and local populations shall be undertaken on good environmental preservation measures. Every employee should be sensitized on the consideration of environmental aspects of his activities and existing procedures. Health and Safety Exercise should be organized periodically (once a month) in presence of the project staff to address specific topics following the incidents of work or recent events that occurred, concerning safety and environment. This ESMF will be applied in all project phases and all actors are obliged to minimize the potential environmental impacts that occur during project execution.

#### **11.1.4 Communication with local population Conclusion**

Local populations in the construction sites or area should be involved in the environmental monitoring and surveillance. The environmental and social team under the leadership of the Site Environment Officer together with the public should implement an external communication with population who are at height of impacts of activities and possible corrections that may be performed in case of incident.

## **12. CONCLUSION AND RECOMMENDATION**

## **12.1 Conclusion**

This assessment report has been conducted to equip the Government of The Gambian authorities such as the MoF, PMU NEA, AfDB and other relevant partners sufficient information about the proposed Gambia Climate Smart Rural WASH Development Project (CSRWASHDEP). Therefore, the site specific ESMPs should be implemented effectively to ensure that significant impacts for each subproject site are identified and mitigated accordingly by the Gambian authorities to limit adverse environmental impacts. It is anticipated that the proposed development project would 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 on enhancing quality water supply and public health sanitation. The negative environmental impacts that have been identified and are associated with the implementation of this project are minimal and could be addressed by implementing the mitigation measures proposed to ensure that they pose no threat to the environment and to the communities. These measures are part of the projects' component and will bring no added cost in the implementation process. The benefits of implementing the project are enormous and will address persistent problems of the inadequate water supply and to poor sanitary condition in across the regions of the The Gambia thus improving communities livelihoods and health conditions.

## **12.2 Recommendations**

This is a multi-sectoral and a multi-disciplinary project. As such, it is important that during the implementation, relevant line ministries and other stakeholders are actively involved to address some of the cross cutting issues such as Health (water borne diseases), water resource use, among other issues such as infrastructure and other challenges. The multi-disciplinary approach will ensure that emerging issues and challenges are adequately addressed and in good time. The contractors and the project proponents should take into consideration all the legislative measures put in place so as to ensure the due process is followed. The mitigation measures provided under this ESMF need to be followed so as to address the environmental and social issues that may arise in the course of the implementation of this project. There is need to have all the necessary 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.

### 13. References

1. Public Health Act, 1990.
2. National Environment Management Act, 1994
3. Environmental Quality Standards Regulations 1999),
4. Local Government Act, 2002
5. Forestry Policy (2006-2016)
6. Agriculture and Natural Resources Policy (ANRP)
7. Gambia Environmental Action Plan, Phase II (2009-2018)
8. Gambia Bureau of Statistics: 2013 Population Results Estimate
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11. “Gambia Demographic and Health Survey“(2013), Gambia Bureau of statistics
12. MDG status report final (2015), UNDP
13. Demographic Health Survey, 2013
14. National Forest Assessment – 2008

### Annexes:

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|-----------------|--|
| <b>Annex A.</b> | <b>List of Public Stakeholder Communities met during Consultation</b>      |
| <b>Annex B.</b> | <b>Summary of Stakeholder Consultation Process Findings</b>                |
| <b>Annex C.</b> | <b>Selected Photos of Consultation Process for Potential Project Sites</b> |
| <b>Annex D.</b> | <b>Sample Grievance- Complaint Reporting Form</b>                          |
| <b>Annex E.</b> | <b>The Screening Forms for Subproject sites</b>                            |
| <b>Annex F.</b> | <b>Sample Land Acquisition Forms</b>                                       |