



REPUBLIC OF SOUTH SUDAN



SOUTH SUDAN



**PROGRAM TO BUILD RESILIENCE FOR FOOD AND NUTRITION
SECURITY IN THE HORN OF AFRICA (HOA)**

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

SEPTEMBER 2021

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ACRONYMS

AfDB	: African Development Bank
CPA	: Comprehensive Peace Agreement
EA	: Environmental Assessment
EIA	: Environmental Impact Assessment
ESA	: Environmental and Social Assessment
ESIA	: Environmental and Social Impact Assessment
ESMF	: Environmental and Social Management Framework
ESMP	: Environmental and Social Management Programme
GHG	: Greenhouse Gas
GoSS	: Government of South Sudan
HCENR	: Higher Commission for Environment and Natural Resources
HIV/AIDS	: Human Immune Virus/Acquired Immune Deficiency Syndrome
HOA	: Horn Of Africa
IBA	: Important Bird Area
IESIA	: Integrated Environmental and Social Impact Assessment
ISS	: Integrated Safeguards System
ITCZ	: Inter-Tropical Convergence Zone
MOEF	: Ministry of Environment and Forestry
MLHR	: Ministry of Labour and Human Resources
NBS	: National Bureau of Statistics
OS	: Operating System
PIA	: Project Implementing Agency

PIU	: Project Implementation Unit
PMU	: Project Management Unit
PPE	: Personal Protection Equipment
RSS	: Republic of South Sudan
SESA	: Strategic Environmental and Social Assessment
WASH	: Water, Sanitation and Health
WHO	: World Health Organization
UNCCD	: United Nations Convention to Combat Desertification
UNFCCC	: United Nations Framework Convention on Climate Change
UNICED	: United Nations International Conference on Environment and Development

1. INTRODUCTION

1.1. Background

South Sudan the newest member of the IGAD block since 2011, is a landlocked country with an area of about 640,000 sq. km and an estimated population of 12.5 million, placing it among the less densely populated countries in Africa (Tizikara and Lugor, 2009) with population density of about 19.53 people per square kilometer. It has three levels of government, namely national, state and local. The local government is further subdivided into the County, Payam and Boma administrations, with the Payam and Boma corresponding roughly to the district and village levels, respectively. Currently, there are ten states and more than 79 counties in the country (Deng, 2014).

Of the total population, 80% is rural and 20% is urban; and about 90% of the total area is arable, with 50% considered as good and prime agricultural land. Of the total prime agricultural land, only about 5% is currently being utilised and 12-15% is covered by ASALs. (CIAT, 1991; CIAT et al., 2011; Draga, 2020). Livestock has been listed to have a great potential in South Sudan to contribute to economic wealth of the country. However, it is equally a contentious resource and a major source of conflict amongst the pastoralists, agro-pastoralists and crop-based farming communities and is thus, a major source of insecurity in the country (Prasad, 1992). Its current capital is Juba, which is also its largest city.

Floods and Droughts are causing damage to the economy, infrastructure and harvests, and currently there are no water resources management plans, or actionable plans or forums to convene, debate, allocate and manage water use optimization across sectors.

At the same time, many problems have arisen from unprecedented urbanization and the construction boom of the past decade, which has caused at times development in drought risk zones, impeded water drainage, and legacy and newly emerging inadequate land use and land degradation in the rural areas. These issues are compounding the climate problems and communities have suffered water shortages, ecosystem degradation, pollution and water-related diseases - particularly in the east of the country.

Habitats in the country include grasslands, high-altitude plateaus and escarpments, wooded and grassy savannas, floodplains, and wetlands. Associated wildlife species include the

endemic white-eared kob and Nile Lechwe, as well as elephants, giraffes, common eland, giant eland, oryx, lions, African wild dogs, cape buffalo, and topi (locally called tiang). The Boma-Jonglei Landscape region encompasses Boma National Park, broad pasturelands and floodplains, Bandingilo National Park, and the Sudd, a vast area of swamp and seasonally-flooded grasslands that includes the Zeraf Wildlife Reserve.

1.2. Environmental and Social Management Framework requirements

This Environmental and Social Management Framework (ESMF) provides a procedure for environmental and social assessment of the proposed program to build resilience for food and nutrition security in the horn of Africa (HOA) in South Sudan. This framework of the environmental and social impact assessment was selected because even though the footprint of the project is known, design and other details about the project and specific project locations are not yet available prior to appraisal mission proposed for the coming months. The framework will guide the government of South Sudan as well as the African Development Bank in determining the appropriate level of environmental and social assessment required for the project as well as its sub-projects in determining the anticipated impacts and in preparing the necessary environmental and social mitigation measures.

1.3. Purpose of the ESMF

This Environmental and Social Management Framework (ESMF) is an assessment tool that will guide the implementation of the proposed program to build resilience for food and nutrition security in the horn of Africa (HOA) in South Sudan whose principal purpose is to contribute to poverty reduction, economic growth and building of community and household resilience to climate change. The project aims to build resilience for food and nutrition security. The net impact will be poverty reduction through improved household income as well as improved food security in South Sudan. The project may also have the impact of improving foreign exchange earnings through trade between South Sudan and its neighbouring countries such as Kenya and The Sudan.

The African Development Bank (AfDB) environmental and social safeguards policy requires the borrower to prepare an Environmental and Social Management Mechanism that ensures a mechanism whereby any project implementing agency carries out preliminary assessments of environmental and social impacts of its proposed activities before undertaking them, and to set out, in general, the mitigation, monitoring and institutional measures to be taken during implementation and operation of the program to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable minimal levels.

1.4. Objectives of the ESMF

It is required both at both the national level and the AfDB level that preliminary environmental assessments are carried out at the identification, preparation or appraisal stages of the any development project. The main objective of this ESMF is, therefore, to ensure that the implementation of the program to build resilience for food and nutrition security in the horn of Africa (HOA) of which the sub-project sites are not yet clear, a preliminary assessment is carried out to ensure environmental and social sustainability during its implementation. The ESMF will provide the project implementers with an environmental and social screening process that will enable them to identify, assess and mitigate potential environmental and social impacts of sub-project activities, including through the preparation of a site-specific Environmental Impact Assessments (EIA) where applicable.

The screening results will indicate whether additional environmental and/or social assessments will be needed or not. Thus, the ESMF is designed to ensure an appropriate level of environmental and social management, which could range from the application of simple mitigation measures (through the environmental checklists) to the preparation of an EIA Report (according to South Sudan's Environmental Impact Assessment & Audit Regulations). More specifically, the objectives of ESMF are:

- To establish clear procedures and methodologies for the environmental and social screening, planning, review, approval and implementation of sub-projects to be financed under the Project;

- To specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to sub-projects;
- To determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF and the subsequent Environmental and Social Management Plans (ESMPs);
- To propose and establish the funding required to implement the ESMF requirements and subsequent environmental and social assessments, monitoring and management; and,
- To provide practical information resources for implementing the ESMF.

This initial assessment ensures that the screening process is developed in view of the types of sub-projects based on the proposed project components despite that actual sub-project locations not being clearly known and ensuring that the funds are allocated for even though other potential impacts will be more accurately identified during the appraisal missions and during the actual design of the infrastructural works phase of the project. However, it is expected that most sub-project activities will have short-term, site-specific, confined and reversible negative environmental and social impacts that can be managed through well-defined simple mitigation and monitoring measures. It will be the responsibility of the Project Management Unit (PMU) at the Project Implementing Agency (PIA) to ensure that the requirements of the ESMF are implemented. Where ESMF approvals are required under national legislation, the responsible authority within the government system will be called upon to take full responsibility.

1.5. Environmental and Social Screening

Environmental and social screening of any project is today a requirement globally. The objective of this Environmental and Social Screening Process (the screening process) is to ensure that the projects are designed and implemented in an environmentally and socially sustainable manner. The laws and regulations in South Sudan, African Development Bank (AfDB) environmental and social Safeguard Policies as well as international laws and

conventions will be taken into consideration during the preparing and actual implementation of this project.

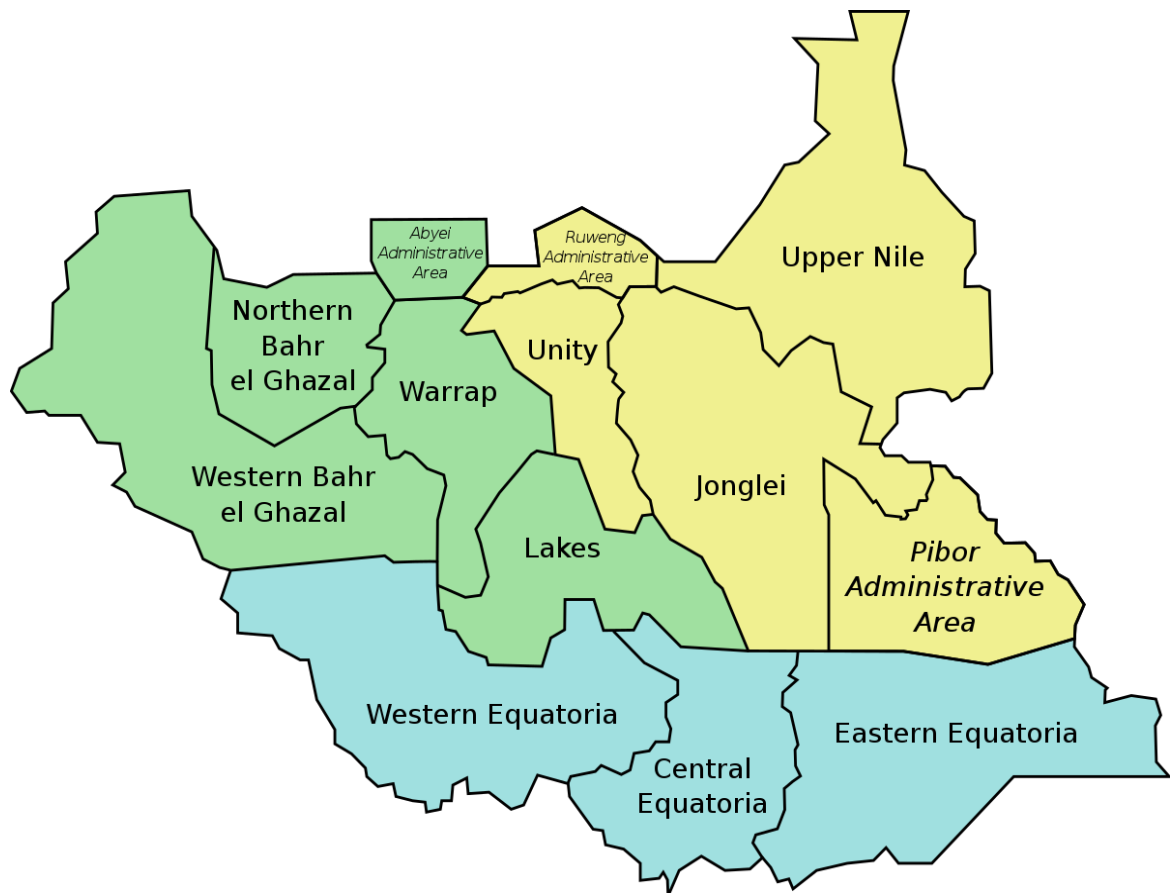
1.6. Preparation and use of ESMF

This ESMF was prepared by an Environmental Consultant working on behalf of the Government of the Republic of South Sudan based on previous experience on similar projects that have been handled. The ESMF provides a guide to be used within existing Government Policy regulations for environment and social processes and other international legislation by donor organizations. This ESMF will be a living document that will be subject to periodic reviews to address specific concerns raised by stakeholders, and emerging policy requirements. It will complement the Environmental Impact Assessment and Environmental Audits guidelines provided for operationalization of provisions of the Environmental Management System in South Sudan.

2. GENERAL BASELINE INFORMATION

2.1. The country – Location and size

South Sudan is a land-locked country in the Greater Horn of Africa, a region generally referred to as Eastern Africa. The map below shows the country and the states therein. South Sudan is bordered by Ethiopia to the east, Kenya to the southeast, Uganda to the south, the Democratic Republic of the Congo to the southwest, the Central African Republic to the west, and Sudan to the north. The vast swamp region of the Sudd formed by the White Nile, locally called the Bahr al Jabal is one of the major land features in the country. The country is dissected into two by the White Nile that runs from the south of the country to the north. The country covers an area of 619,745 km² and is divided into 10 administrative states as shown in the map below.



Map of South Sudan showing the ten states and the three administrative Areas

2.2. Environmental conditions

2.2.1. Physiographical characteristics of the country

South Sudan is divided into several ecological zones; rainforest, savannah forest, flood plains, swamp and semi-desert. Physiographically, South Sudan is predominated by expansive flood plains and Sudd wetlands, associated with the River Nile and its tributaries. The major geographical features are the White Nile which dominates the centre of the country and forms the vast Sudd Swamp, one of the largest wetlands in the world. The Sudd Swamp covers an area ranging between 45,000 km² during the driest periods and 100,000 km² during the wettest periods which is more than 15% of the land size of South Sudan (State of the Environment Report 2018). There are southern highlands at the border with Uganda and Kenya. The Ethiopian Highlands extend to South Sudan's border in the eastern part of the country while the River Congo Basin Highlands are found partly on the southern and southwestern parts of the country.

2.2.2. Climate

The climate of South Sudan is characteristically by hot and dry with seasonal rains that are significantly influenced by the migration of the Inter-Tropical Convergence Zone (ITCZ) between the Tropic of Cancer in the north and the Tropic of Capricorn in the south. The green belt zone in the southernmost part of the country receives up to 2500 millimetres of rain. A significant proportion of the country receives rainfall of 800 mm – 2,000 mm per annum. The marginal regions of the country receives rainfall between 300 mm and 700mm per annum. Whereas the greenbelt zone experiences bimodal rainfall between April and June and between August and October. The rest of the country receives mono-modal rainfall occurring between April and October.

Temperatures range between 25° C and 45° C with a growing season of between 100 days and 250 days depending on the agro-ecological zones of the country. In terms of land cover, vegetation density is higher in the southwestern part of the country where rainfall is higher with the tropical rainforest kind of conditions. A greater proportion of the country

comprises wooded grassland or the Savannah kind of vegetation. Drier areas are covered by bushed grassland.

2.2.3. Climate change

Like most African countries, South Sudan contributes very little in terms of carbon emissions globally, and yet is highly vulnerable to the impacts of climate change – principally rising temperatures and increased variability of rainfall. The vulnerability of South Sudan is highly exacerbated by its limited resilience due to high levels of poverty, low household incomes, poor infrastructure, among other factors. These challenges have been exacerbated by armed conflicts and insecurity.

A warmer climate and drier weather affect biological productivity hence have implications on food security through reduced harvests and lack of livestock food supply (reduced grazing and browsing supplies). Among the impacts of climate change are: (i) loss of agricultural production potential increasing famines and general food insecurity; (ii) negative impacts on rain-fed agriculture; (iii) loss in pastureland productivity and reduced access to water resources for livestock; (iv) increase in disease and pest occurrence for humans and livestock as well as crops; (v) reduction in production potential due to habitat degradation could result into human conflicts (inter-community conflicts over resources); and, (vi) destruction of infrastructure through intermittent flooding and drought.

2.2.4. Natural hazards and disasters

Natural hazards are natural processes or phenomena that may cause loss of lives, injuries, negative health impacts, damages to property and infrastructure, loss of livelihoods and services, disruption of social and economic activities or may damage or degrade the environment. It is important to note that human activities that degrade the environment exacerbate the impacts of natural hazards and disasters. Natural hazards can be categorized as: (1) geophysical (including earthquakes, volcanos, landslides, avalanches, tsunamis and the likes); (2) meteorological (such as storms, cyclones, hurricanes, typhoons, blizzards, etc.); (3) hydrological (that include floods, storm surges, flush floods, etc.); (4) climatic

(including droughts, extreme temperatures, wildfires, etc.); (5) biological (epidemics, infestations, etc.).

In South Sudan common natural hazards and the subsequent disasters include earthquakes. Recent historically recorded earthquakes include the ones recorded in 2006, 2007, 2010 and 2014. The frequency of earthquakes is because of the location of South Sudan in the western Rift Valley. The earthquakes are caused by earth crust rupturing and tectonic actions and reactions. Other common hazards include extreme weather conditions especially droughts, torrential rains and seasonal flooding. Extreme weather conditions sometimes also lead to other hazards such as disease outbreaks, pest infestation, etc.

2.3. Socio-economics

After the end of the civil war that lasted for more than 22 years following the Comprehensive Peace Agreement (CPA) signed in 2005, South Sudan began the challenging process of re-building following the loss of an estimated 2 million people, displaced over 4 million inhabitants and an almost total collapse of infrastructure. Large numbers of internally displaced people and refugees returned to South Sudan which further strained the already overstretched basic services and minimal level of infrastructure. A number of development partners have been implementing projects in the areas of livelihoods, capacity-building, infrastructure development, water and sanitation, civic awareness and participation, and prevention and response to other ills such as gender-based violence.

The low level of economic development in South Sudan is a particular concern with regard to finding effective and sustainable reintegration opportunities. Managing expectations and matching reintegration programmes with the expectations of former combatants and associated groups is vital. There is limited access to basic social services and a shortage of trained human resources across the country. Extensive capacity building of human resources and institutions is essential for the effective socio-economic development in

South Sudan. Recent civil wars further affected economic development and led to further destruction of socio-economic infrastructure.

The population estimates by the National Bureau of Statistics (NBS) of South Sudan is about 12.3 million. The population is principally rural based with about 85% of the people living in rural areas and depending on subsistence agriculture. South Sudan has a great potential for agriculture. The country has 62 million hectares of land in the Nile river basin, approximately 75% of which is suitable for agriculture. About 70% of the population cite farming, animal husbandry and fishing as their primary source of livelihood. This high potential on agricultural production, however, has not been fully utilized to feed the people in the country. According to the latest Integrated Food Security Phase Classification issued in June 2019, 6.35 million people are facing crisis (IPC Phase 3) and high levels of food insecurity. This is historically the highest number of people in South Sudan ever to face Crisis (IPC Phase 3) acute food insecurity or worse.

The common crops grown in South Sudan include sorghum, maize, rice, sunflower, cotton, sesame, cassava, beans, and groundnuts. However, due to poor infrastructure and lack of markets, these products rarely find their way into markets and thus are not traded on a significant scale (despite the high potential for production). As such most households are poor and lack incomes to improve their living standards. The long running battles during the civil war and recent internal military scuffles caused major destruction and/or decline in the quality of existing markets and general infrastructure besides negligible routine maintenance. As a result, most existing infrastructure needs rehabilitation. Consequently, markets are currently overpopulated with vendors well beyond their carrying capacities and lacking in many basic facilities, including electricity, storage rooms, hygiene facilities including toilets, drainage and sewage. Access to markets is also a problem in the country as only two percent of the existing road network is paved. Most roads are impassable during the wet season, making it difficult if not impossible for rural people to reach the markets. Transportation costs are high and hinder the movement of goods from rural areas to urban centres and markets in the country causing artificial scarcities.

3. METHODOLOGY

3.1. Introduction

The preparation of this Environmental and Social Management Framework (ESMF) involved the use of several methods in order to meet the requirements and standards. Key in the preparation of this ESMF was to provide a screening process for the potential environmental and social impacts for the proposed project activities and subsequently recommend a mechanism for management plan for enhancing the potential positive impacts and addressing the negative impacts associated with the project. These are based on the components of the project and the activities thereof. The methods used include:

3.2. Literature Review

A number of documents were reviewed including internet searches. Among the key documents used are the State of the Environment Report of 2018 and the Emergency Food Crisis Response Project Report of 201. The other document included the Project background document which provided detailed description looking at project development objectives and key indicators, project components and project activities. Some key baseline information on South Sudan's recent macroeconomic development especially in the agricultural sector development initiatives were reviewed. Efforts were made to get various policy, legal, regulatory and administrative framework documents relevant to the proposed project. African Development Bank's (AfDB's) Five Operational Safeguard Policies were reviewed to help identify the likely policies to be triggered by the project and its 3 operational components.

The specific locations of the program to build resilience for food and nutrition security in the horn of Africa (HOA) - remain broad and not pin-pointed but are broadly known focusing on 2 States of Northern Bahr El Ghazal and Eastern Equatoria while the specific counties have not been identified hence the preparation of this ESMF rather than an Environmental and Social Management Plan (ESMP) or an Environmental and Social Impacts Assessment (ESIA) report. The literature review was also carried out to further

generate information to provide an overview of the state of the general environment in South Sudan. Efforts have been made to gain legal framework, policies and regulatory frameworks for implementation for the implementation of such project in South Sudan.

3.3. Interactive discussions and consultations

During the preparation of this ESMF a number of individuals and institutions were consulted. Some of the staff of the line Ministries have been consulted. Further public consultations and stakeholder engagement and personal contributions, including project beneficiaries will be carried out after the specific counties where the project will be implemented have been identified. Such consultations will be carried out during the project appraisal mission and during the site specific environmental and social assessments. The stakeholder consultations and engagements are very important in the preparation of the ESMF and subsequently the ESMP and ESIAs and will form the basis for the determination of exact project impacts of the beneficiaries, at sector level and viable mitigation measures to be adopted.

3.4. Preparation of the ESMF

Preparation of this ESMF included the following stages:

- Collation of baseline data on the environmental conditions of the country in general;
- Identification of positive and negative environmental and social impacts of the proposed projects at potential sector level;
- Identification of environmental and social mitigation measures;

3.5. Description of the HoA program DRSLP Programme/Project

3.5.1 The objective of the program

The overall objective of the program consists of contributing to the poverty reduction, food security and the acceleration of economic development through increasing the income in rural area. For short and long term, the program aims to improve the life conditions of people and the pastoral and agro-pastoral production systems. This program will promote the development of the resistance conditions to drought of populations through the reduction of dependence on rainfall conditions. It expects to set up infrastructures to increase the availability of water for livestock and people, which will promote the sedentarization and the reduction of cross-border disputes. This action will then ensure sustainable stabilization of environment and harmonious sharing of water resources and of grazing.

Then, this is program is organized into three main components namely: (i) Development and Management of water resources (ii) Improvement of livestock infrastructures (iii) Program management and capacity buildings.

3.5.2 The components of the program

Component 1: Water resources development and management for livestock and agriculture

This component is focused on the development and implementation of infrastructures facilitating the access and the availability of water for human consumption, agricultural use and the feeding of livestock in a sustainable manner. Referring to transboundary nature of water resources in the region, this component will need to focus on regional cooperation for a better coordination of the different watersheds of rivers in the IGAD region. The planned activities are the following:

- **Improvement of water management infrastructures:** the specific objectives of this subcomponent are; (i) make available water for human consumption, livestock and agriculture through investments in development of infrastructures of water storages as: mini-dams, reservoirs and wells; (ii) construction and rehabilitation of irrigation schemes and other water supply systems; and (iii) protection and conservation of the reservoirs and the watershed.
- **Strengthening cooperation and regional coordination by implementing reliable information system throughout the basins of rivers.** These activities will include (i) multifunctional projects feasibility studies, improvement of technology of the ground water management. (ii) the establishment of reliable hydro meteorological networks for monitoring and evaluation of water in different basins; (iii) rehabilitation and/or replacement of defective control and monitoring of

gauging instruments of water resources; and (iv)) implement a system of common network (between countries) of monitoring and evaluation of the information management for each river basin.

Component 2: Improvement of the livestock infrastructures in the program area.

This component is oriented towards livestock marketing infrastructures in the region, sustainable development of pasture, implementation of animal health infrastructures and the strengthening of production structures of animal feed. This component subprojects proposed are the following:

- **Infrastructures to facilitate the commercialization of livestock:** these activities are: the improvement of infrastructures to increase the value along the chain of marketing of livestock products. The planned activities comprise: (i) the realization of a study of a regional market to optimize the potential value chains and the strengthening of the regional trade (ii) development of roads access (trails and roads) to facilitate access to livestock and other markets; (iii) construction of markets for cattle, stations of quarantine, the establishment and improvement of transit site (rest) the livestock and other checkpoints; (iv) the construction of slaughterhouses and other transformation infrastructures for standardization to ensure the marketing of livestock products; and (v) development and implementation of the program which allows the identification and traceability of the movement of livestock in the region.
- **Improvement of the livestock management:** this consists of (i) to improve the pastures by reseedling (ii) control of bush (iii) the development of the pasture management plan (alternative system) ; (iv) development of activities for the conservation of water and soils and (v) livestock census (analysis of cattle movement in the program area).
- **To improve animal health:** this is to: (i) improve the animal health services by implementing good functional and reliable diagnostic laboratories, veterinary services (clinics) with immunization programs; monitoring of cross-border and non-border diseases propagation by implementing the regional monitoring and evaluation system; (ii) strengthening of institutional capacities in the diagnosis of diseases, the sanitary and phytosanitary measures, the development of standards, procedures and certifications; (iii) to support genetic research activities oriented towards the improvement of the races in order to accede to markets and to promote suitable races and resistant to ecological

conditions, (iv) promotion of researches for genetic improvement of local species to increase the price of cattle on the market.

Component 3: Program management and capacity-buildings

This component aims to strengthen the institutional capacities and human resources for the promotion of the operational capabilities of the region. These activities include: (i) strengthening of IGAD capacity and the relevant national institutions; (ii) the development of policies and the regional laws to improve the participation of the communities in water management, pasture and livestock market; (iii) improvement of the regional livestock marketing information systems; (iv) improving access to basic services and encourage the public-private partnership approach in the management sector and marketing of livestock products; (v) promote access to knowledge through the information broadcasting and the results of the research; (vi) contribute and facilitate equitable access to local resources, to the peace promotion and the conflicts management by capacity buildings of communities, national and regional institutions (vii) implement measures of resistance and adaptation to climate change for sustainable development.

3.5.3 Program alternative solutions

To succeed the resilience to drought, the countries of the program area undertook several initiatives in particular the actions of implementation the water supply infrastructures for livestock and humans. However, taking into account the drought rapidity and the extent affected, their impacts are still very low. In addition, these initiatives cover neither the improvement of pasture course nor the improvement of the commercialization conditions of livestock. To refuse the implementation of this program (DRSLP-HoA) constitute the status quo and therefore the life conditions of the population and livestock would remain as they are and the environment degradation will continue and will accentuate more accordingly. The accentuation of climate changes will cause the disappearance of cattle and the immigration of human populations and the increase of insecurity. Referring to the previous ones, the phase of non-realization of this program is not to consider.

4. LEGAL, POLICY AND REGULATORY FRAMEWORK

4.1. Environmental Governance

The foundation document guiding the future of South Sudan in terms of development is the draft South Sudan Vision 2040: Towards Freedom, Equality, Justice, Peace and Prosperity for All. The overarching goals of Vision 2040 are to create a vibrant, competitive and diversified economy driven by agriculture, industry, mining, tourism and services that attracts investors. The Vision does also promise the Government of South Sudan's commitment to sustainable environmental management alongside limiting environmental pollution due to other development programmes such as industrialization. The Vision emphasizes the need to minimize greenhouse gas emissions as a measure against climate change while building on traditional knowledge and supporting community-based resilience.

In terms of institutional framework to govern the environment, it is important to note that South Sudan is still at its nascent stage of building its institutions. Institution building has been further hampered by recent armed conflicts that have been on-going in the country. Technical capacity in environmental management remains a great challenge. Environmental management has also been greatly affected by limited financial resources. Despite all these challenges, the government has put in place the following institutions that are playing a major role in addressing environmental issues: (i) the Ministry of Environment and Forestry (MOEF); (ii) the Ministry of Humanitarian Affairs and Disaster Management; (iii) South Sudan Relief and Rehabilitation Commission; (iv) South Sudan Directorate of Meteorological Services; (v) Ministry of Agriculture and Food Security (MAFS); (vi) Ministry of Livestock/Animal Resources and Fisheries; (vii) Ministry of Energy and Mining; (viii) Ministry of Wildlife Conservation and Tourism; (ix) the Ministry of Irrigation and Water Resources; and, (x) Ministry of Finance, Commerce and Economic Planning, (xi) Ministry of Petroleum, (xii) Ministry of Mining, etc. These are among the institutions that are, if well coordinates, will assist in managing and improving environmental management in South Sudan

4.2. National Policy, legal and regulatory framework

All multilateral development and financing institutions require that all development projects be subjected to environmental and social screening process. The screening criteria adopted will be based on the country's screening requirements as well funding agency's environmental and social screening policies. The screening provided in the ESMF includes relevant questions which will help determine if any other safeguard policies are triggered and the measures needed to be taken into account to mitigate the impacts associated with the implementation of the project as well as any sub-projects that may result from the implementation of the project. The screening and review process will identify any sub-projects/activities that may have potentially significant impacts which require more detailed study and the need for a sub-project specific Environment and Social Assessment (ESA). This will ensure that all concerns related to South Sudan environmental legislation and the Bank's safeguard policies are taken into account during the screening of sub-projects for potential impacts, and that the appropriate mitigation measures can be adopted to address them.

South Sudan attained independence in July 2011. Since the attainment of Independence, the Government of South Sudan has adopted a new Constitution, and a number of new policies and legislations have been prepared while others are still being drafted, with the ultimate aim of enhancing sustainable socio-economic development in the country. The policies and laws provide procedures to be followed in the planning and implementation of government activities in order to utilize resources and execute government programs to maximum benefit. Below are some selected policies and laws, which are applicable in the planning and implementation of public sector projects, more especially those projects in the agricultural and forestry sector.

4.2.1. The Transitional Constitution of 2011

The Transitional Constitution of the Republic of South Sudan of 2011 is the overarching legal instrument in the management of the country. It incorporates numerous provisions

that have a bearing on the environment. Article 41 (1) provides that the people of South Sudan shall have a right to a clean and healthy environment; Article 41 (2) states that every person shall have the obligation to protect the environment for the benefit of the present and future generations; Article 41 (3) states that every person shall have the right to have the environment protected for the benefit of the present and future generations, through reasonable legislative actions and other measures that include: (i) prevention of pollution and ecological degradation; (ii) promoting conservation; and, (iii) securing ecologically sustainable development and use natural resources while promoting rational economic and social development so as to protect the bio-diversity of South Sudan. Article 166 (6) expects local governments to involve communities in decision making in the promotion of a safe and healthy environment.

4.2.2. Environment Policy of South Sudan, 2010 (Draft)

This policy was drafted in 2010 on the eve of independence. The policy provides guidelines for a wide range of responses to environmental management challenges to enable decision makers and resource users make development choices for environmental sustainability. The guidelines can be used to ensure that development projects are economically efficient, socially equitable and environmentally friendly to ensure realization of sustainable development. The National Environment Policy does ensure protection and conservation of the environment and sustainable management of renewable natural resources for long term goals. The objectives of the Policy are: (i) to improve livelihoods of South Sudanese through sustainable management of the environment and utilization of natural resources; (ii) to build capacity of the government at all levels of governance and other stakeholders for better management of the environment; (iii) to integrate environmental considerations into the development policies, plans, and programs at the community, government and private sector levels; and, (iv) to promote effective, widespread, and public participation in the conservation and management of the environment;

This policy is adopted in this ESMF because it provides general guidelines and principles to be followed in environmental management during the implementation of the proposed project and other projects in the agriculture sector.

4.2.3. The Environment Protection Bill, 2010 Cap 7 (Draft)

The Environment Protection Bill (Cap 7) of 2010 is another very critical piece of legislation in the implementation of the proposed project. Section 32 of the Draft Environment Protection Bill, 2010 Cap 7 introduces the requirement for Environmental Audits. An Environmental Audit, according to this Bill, is defined as the systematic, documented, periodic and objective evaluation of how well Environmental organization, management and equipment are performing in conserving the Environment and its resources during a project implementation process. The principles guiding the Environmental Audit include: (i) The Project Implementer being responsible for carrying out an Environmental Audit of all activities that are likely to have a significant effect on the Environment, in consultation with the Lead Agency; (ii) An Environmental Inspector being able to inspect any project or anywhere, land or premises for the purpose of determining how far the activities carried out on that land or premises conforming to the statements made in the Environmental Impact Assessment or Environmental and Social Management Plan in respect to the project being implemented; (iii) orders a project implementer for which an Environmental Impact statement has been made to keep records and make quarterly and annual reports to the Ministry of Environment and Forestry describing how far the project conforms in operation with the statements made in the Environmental Impact statement; (iv) requires that a Project Implementer takes all reasonable measures to mitigate any undesirable effects not contemplated in the Environmental Impact Statement and prepares and submits an Environmental audit report on those measures to the Ministry on quarterly and/or annually or as the Authority may, in writing, require.

4.2.4. The Environmental Protection Act, 2001

The Environmental Protection Act of 2001 remains an important piece of legislation in ensuring environmental conservation in South Sudan. Its principal objectives are: (i) To protect the environment in its holistic definition for the realization of sustainable

development; (ii) To improve the environment while ensuring sustainable exploitation of natural resources; (iii) To create a link between environmental and developmental issues, and to empower concerned national authorities and organs to assume an effective role in environmental protection.

Section III of this Act outlines general policies and principles for the protection of the environment. Even though these policies and principles are not legally binding, observation of these guidelines remain important for concerned authorities when setting up development policies. Article 17 of the Act required during the earlier days that any individual who intended to implement any project that was likely to have a negative impact on the environment to present an Environmental Impact Assessment (EIA) for approval by the Monitoring and Evaluation Committee of the Higher Commission for Environment and Natural Resources (HCENR) of the then Federal Government of Sudan. Such study was expected to contain the following information: (i) the anticipated impact of the project on the environment; (ii) The negative impacts that could be mitigated during implementation of the project; (iii) Alternative options for the proposed project; (iv) A clear undertaking that the short-term utilization of natural resources and the environment will not jeopardize their long-term sustainability; and, (v) The precautionary measures to be taken to mitigate the negative impacts of the project.

Article 18 lists the duties of the competent authority in complying with the general environmental policies and directives to include the follows: (i) To lay down quality control standards for the protection of the environment; (ii) To preserve water sources from pollution; (iii) To protect air, food, soil and vegetation cover from pollution and degradation; (iv) To preserve the flora and fauna from extinction as a result of illegal hunting or any other human threat; (v) To protect food from contamination or pollution by chemicals or any other factor; (vi) To protect the air from pollution caused by physical operations or chemicals; and, (vii) To preserve the soil from any pollution resulting from harmful industrial and other types of waste

4.2.5. Forests and Renewable Natural Resources Act, 2002

This is an Act that was used during the days of the unified Sudan. As a result of the adoption of the Federal Government System (FGS), the 1989 laws were revised in 2002 and merged into one law, namely the Forests and Renewable Natural Resources Act. The 2002 Act attempts to follow a more holistic approach by providing a framework for the management and protection of forests and renewable natural resources, including pastures, rangelands and certain aspects of agricultural land use. It also provides a framework governing the management of the forestry sector. Investors are obliged to convert the cleared trees into forest products. The Act also obliges any driver of any vehicle used for transporting forest produce to obtain a permit from the respective authority. Furthermore, it imposes a deterrent penalty, namely the confiscation of any property, including the means of transport used in the commission of the forest offence, for the benefit of the corporation. Unsuccessful attempts were subsequently made to revise this Act in the light of the many changes that had taken place in the country, namely the adoption of a new constitution following the signing of the Comprehensive Peace Agreement (CPA), the federal system adopted by government, the division of authority and wealth among the various levels of government, the development of an oil industry, the risks posed by the current rate of deforestation, including the loss of the country's place in the international gum arabic market, and the growing awareness of forestry's role in environmental conservation. The Act remains relevant in the management of forests in South Sudan.

4.2.6. The Food and Agriculture Policy Framework, 2007

The Food and Agriculture policy framework of the Ministry of Agriculture and Forestry emphasizes the need to transform agriculture from traditional/subsistence system to achieve food security through science-based, market oriented, competitive and profitable agricultural system without compromising the sustainability of the natural resources for generations to come. In order to achieve the objectives of this act, several strategic objectives were developed. Key among them include: (i) priority policies that quickly

boosts agricultural production; (ii) making available agricultural inputs, including credit facility, at affordable cost; (iii) rehabilitation and expansion of rural infrastructure including feeder roads, markets; (iv) developing and providing research and extension services, and market linkages; (v) developing and strengthening institutional and human resource capacity; (vi) protecting, regenerating and conserving natural resources; and, (vii) formulating policy incentives for rational and sustainable management and utilization.

4.2.7. Pesticides and Pest Control Products Act 1994

This is another Act that was inherited from the United Sudan. Pesticides for all purposes including public health are currently regulated in the Sudan by the same Act namely the Pesticides and Pest Control Products Act 1994 which replaced the Pesticides Act of 1974. The Act regulates all activities related to pesticides registration, importation, storage, transportation, use, formulation and any other related activities in the country through the National Pesticides Council (NPC). The NPC is a multidisciplinary inter-ministerial council which has representatives from all stakeholders within the country including the Ministries of Agriculture, Health, Animal resources, Research Institutions, Customs, Universities, etc. The council is chaired by the Undersecretary, Ministry of Agriculture and Food Security. The registrar of the council is the Director General, Plant Protection Directorate (PPD). The registrar is responsible for all administrative and executive functions of the council. Pesticides were classified according to World Health Organization (WHO) regulations as acute, high, moderate and low toxicity based on the LD50 level. According to these criteria the NPC licenses the retailers to only deal with the pesticides of low toxicity.

4.2.8. The Land Act, 2009

One of the key objectives of the Land Act is to promote a land management system to protect and preserve the environment and ecology for the sustainable development of South Sudan. It also provides for fair and prompt compensation to any person whose right of occupancy, ownership or recognized long standing occupancy of customary use of land is revoked or otherwise interfered with by the Government.

The Land Act reinforces government recognition of customary land tenure. The Act states that “Customary land rights including those held in common shall have equal force and effect in law with freehold or leasehold rights”. The Act further states that Community land can be allocated to investors as long as investment activity reflects an important interest for the community and contributes economically and socially to the development of the local community. It also requires that state authorities approve land acquisitions above 250 feddans (105 hectares) and create a regulated ceiling on land allocations. The Land Act requires government to consult local communities and consider their views in decisions about community land. The Act also gives pastoralists special protection and states that ‘No person shall without permission ... carry out any activity on the communal grazing land which may prevent or restrict the residents of the traditional communities concerned from exercising their grazing rights. Project proponents must also conduct environmental and social impact assessments (ESIAs) before undertaking any activity that might affect people or the environment.

4.2.9. Forest policy, 2012

The Forest Policy was formulated in 2012. The Policy is broadly intended to protect the roles forests play in stabilizing the global systems including the hydrological balance, the carbon balance, atmospheric systems, etc. The policy broadly aims to achieve ecological stability of rivers systems, the lakes, swamps, agricultural production and other natural ecological systems. It is also meant to ensure that there are optimal benefits from forestry and agro-forestry activities for food security and poverty alleviation among our rural communities through provision of woody and non-wood forest products. The policy integrates forest sector actions with rural development efforts to ensure that the rural population of South Sudan has access to basic needs which include sustainable household food security, shelter, wood fuel, safe clean water, as well as sanitation and health facilities.

The resources derived from forest resources are important in supporting primary education, local governance and community empowerment. The guiding principles of the Forest Policy include: (i) sustainable management of all forests and tree resources of South Sudan to ensure continuous accrual of benefits to the present and future generations; (ii)

Establishment and management of permanent forest estates (PFE) to ensure conservation of biodiversity and steady flow of benefits; (iii) forests and tree resources will be managed in accordance with set criteria and indicators for sustainable management; (iv) regular development of appropriate policies, legislation, institutional reforms that will be implemented to support growth and sustainability of the forest sector; (v) establishment of industrial and other plantations for sustainable supply of forest resources to meet the increasing demands; (vi) increased community participation in forest management through collaborative management schemes while the community sustainably benefit from forest resources; (vii) development of forest products based industrial development (forest products processing) to promote and support increased economic benefits from forest resources; (viii) strengthening of forestry management institutions increase productivity, achieve household food security, alleviate poverty and contribute to the macro-economy of South Sudan; (ix) sustained commitment to forest related regional and international agreements and conventions; and, (x) human capacity development in the management of forests and tree resources.

4.2.10. Public Health Act of 1975

This Act protects general public health by regulations issued by the Public Health Council, whose members include the Ministries of Agriculture and Forests, Federal Rule, Animal Health and various administration departments of the Ministry of Health. The proposed project will be implemented in accordance with the Act, especially in the value addition processes, marketing and trade as well as transportation of the agricultural produce and agro-industry outputs.

4.2.11. Environment Health Act 1975

The Act covers prevention of water pollution, inspection of drinking water, disposal of wastes and sewage, inspection of industrial areas and bakeries, prevention of air pollution and inspection of waste disposal and management systems. The management of wastes and especially the use agrochemicals will be critical in the term environmental sustainability of this project.

Listed above are some of the national legal requirements that the proposed project will abide by during its implementation.

4.2.12. Fisheries and Aquaculture Policy 2012-2017

South Sudan's fisheries and aquaculture policy was written and completed in early 2012, but its scope is limited and does not identify strategies for realizing development of the subsector. The development of fisheries and aquaculture is also covered by the FAO Code of Conduct for Responsible Fisheries which is contained in "Post-Harvest Practices and Trade". Therefore, the Department of Fisheries and Aquaculture Development in the national Ministry of Livestock and Fisheries (MLF) will have to follow FAO Codes of Practices and the other guidelines laid in the National Fisheries Policy 2012-2016 until all other necessary policies are reviewed, passed and harmonized.

The fisheries and aquaculture policy provides direction for sustainable fisheries and aquaculture development and production. This will contribute to economic growth, food security and poverty alleviation. The policy also hopes to:

- i. Attract private investment to aquaculture by creating a conducive environment,
- ii. Management and conservation of fishery resources.
- iii. Promotion of aquaculture development.
- iv. Promotion of fish quality control and preservation techniques.
- v. Enhancing good fish marketing.
- vi. Development and enforcement of fisheries laws and regulation
- vii. Development of research, training and extension services.
- viii. Strengthening the institutional frame work.
- ix. Conducting surveys on fisheries stocks and potential and sharing data on production
- x. Supporting the States in institutional and human resources development (trainings, and provision of fishing gear and equipment)
- xi. Formation of strong linkages with States governments to ensure effective management of fisheries resources.

The policy derives its key principles from the Transitional Constitution, South Sudan Development Plan 2011-2013 and Vision 2040, with sections on sustainable management of natural resources, involvement of communities in decisions regarding exploitation of natural resources and the development of the private sector.

4.3. International Conventions and Treaties

The project will also have to abide by a number of international regulations and requirements, especially those that South Sudan has ratified. South Sudan is party to or in the process of ratifying a number of treaties and agreements. Some of the environmental treaties to which South Sudan is a party include:

4.3.1. African Convention on the Conservation of Nature and Natural Resources

The African Convention of Nature and Natural Resources emphasizes the need for conservation, utilization and development of natural resources in Africa in accordance with the scientific principles and with due regard to the best interest of the people. It requires parties to establish land use plans based on scientific investigations when implementing agricultural practices and agrarian reforms. Projects in MAFS should utilize agricultural scientific knowledge and interventions in the conservation, utilization and development of natural resources.

4.3.2. Convention on Biological Diversity (1992)

The Convention on Biological Diversity is a broad approach to conservation of biodiversity and natural resources. The Convention requires that Parties to the Convention adopt national strategies, plans and programmes for the conservation of biological diversity, and to integrate the conservation and sustainable use of biological diversity into relevant sectoral and cross-sectoral plans, programmes and policies.

4.3.3. United Nations Convention to Combat Desertification (UNCCD, 1996.

The United Nations Convention to Combat Desertification (UNCCD) was adopted in 1994 and came into force in December 1996. The objective UNCCD is to combat desertification and mitigate the effects of drought in in countries seriously affected by droughts, especially in Africa, Latin America, the Caribbean, Asia, and Northern Mediterranean. The Convention seeks to achieve this objective through integrated approaches to development, supported by international cooperation and partnership arrangements, in the affected countries. It lays emphasis on long-term strategies that focus on improved productivity of land and the rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level.

4.3.4. United Nations Framework convention on Climate Change (1992)

The United Nations Framework Convention on Climate Change (UNFCCC) was prepared in Rio de Janeiro, Brazil, in 1992 during the United Nations International Conference on Environment and Development (UNCED). The Convention seeks to regulate levels of greenhouse gases (GHGs) concentration in the atmosphere, so as to avoid the occurrence of climate change at levels that would harm economic development, or that would impede food production. The Convention is founded on the principle that contracting parties should take action, in respect of their economic and social activities, and with regard to the Convention's specific requirements, that will protect the global climate to ensure sustainable development.

4.3.5. The Ramsar Convention on Wetlands of International Importance especially as waterfowl habitat (1971)

The Ramsar Convention on Wetlands was prepared at Ramsar in Iran in 1971. The Convention is primarily concerned with the conservation and management of wetlands of international importance. It advocates the conservation of flora and fauna, and especially waterfowl by combining national policies with international actions. It was signed at Ramsar, Iran on 2nd February 1971 and amended by the protocol of 3rd December 1982.

Further amendments were done on 28th May 1987. Parties to the Convention are required to promote the wise use of wetlands in their territories and to take measures for their conservation by establishing nature reserves in wetlands, whether they are included in the Ramsar list or not. During the implementation of this projects it would be important ensure adherence to the Ramsar Convention's principles because South Sudan has one of the largest wetland in the world.

4.3.6. Important Bird Areas

South Sudan is home to one of the world's largest wetlands and the largest in Africa. The Sudd wetland, with an estimated area of approximately 57,000 km² represents one of the largest freshwater ecosystems in the world. The extent of the Sudd wetlands is highly variable, depending largely on the seasons and years as well. In the wet season the size of the wetland increases up to 90,000 km² and gradually decreases to about 42,000 km² depending on high seasonal flood. It is sustained by the flow of the White Nile (or Bahr el Jebel) on its northwards flow from Lake Victoria in Uganda to the Red Sea in Egypt. Additional waters come from rainfall runoff from its surrounding areas. The White Nile dissipates northwards from Juba across a shallow depression to produce a network of channels, lagoons and inundated areas, which harness the nutrients of the underlying clay soils. Patterns of flood inundation heavily influence the Sudd's vegetation, which consists primarily of permanent swamps, river and rain flooded grasslands, and floodplain woodlands. These habitats exhibit strong environmental gradients with pronounced short and long-term variations in biomass production and distribution. The Sudd Wetland is a UNESCO recognized World Heritage Site. It falls in three states of Jonglei, Unity and Upper Nile States and has been identified as an Important Bird Area (IBA) and migratory region of mammals in South Sudan. As such any project targeting the area must take cognisance of this importance.

4.3.7. The Nile Treaties

Should the proposed project be in sites that will influence the flow of the waters of River Nile, then they must take cognizance of the Nile Treaties. There are about eleven treaties dealing with the consumptive use of the waters of River Nile and Lake Victoria. The

riparian countries are under obligations under general international law to permit the lower riparian States an equitable share of the water, but the exact modalities are subject to negotiations. The Nile Basin Initiative is currently addressing the issue of equitable utilization of the common Nile Basin water resources. The Nile Basin Initiative seeks to harness the tremendous potential of the Nile for the benefit of the people of the Basin, both for now and for generations to come. This becomes a major challenge because as economic development accelerates, population increases and demand for water grows. NBI's Shared Vision is to advance the concept of sustainable economic development from the use of the River Nile waters for the benefit of all people of the Nile basins.

4.3.8. The AFDB's environmental policy

According to the African Development Bank, strategic environmental and social assessment (SESA) is an instrument that evaluate the environmental and social effects related to policy, strategy, plan, or program proposal, in particular the proposals for a specific region (regional environmental and social evaluation) or a sector (environmental and social evaluation for sector). In this case, the SESA concerns the program evaluation of resilience to drought and to sustainable development in the Horn of Africa (DRSLP-HoA). The Bank (2004) had defined procedures for environmental and social assessment for improvement of decision making and ensures the results of the projects to ensure that projects, plans and programs funded by the Bank are viable on environmental and social plan, and if they are conformed to the Bank's policies and guidelines. The ESAP introduced strategic environmental and social Assessment as a tool to assess, on environmental and social point of view, plans and programs to be funded by the Bank. The ESAP also formalize the use of the Environmental and Social Impact Assessment (ESIA), the Environmental and Social Management (ESM) and Environmental and Social Audits (ESA), as instruments to increase the project benefits and, by order of priority, to prevent, minimize, mitigate or compensate the negative impacts. The first step is to develop and to update the basic information on the components, policies, programs and the capacities of PMR to environmental and social capabilities to integrate better these aspects among the priorities during national programming.

During the identification phase, the tri-preliminary (Screening) step focuses on the environmental and social dimensions of a project in order to be classified in one of the following four categories:

- The projects of category 1 are those that are likely to cause the most serious environmental and social impacts and requiring a detailed Environmental and Social Impacts Assessment.
- The projects of category 2 are those that are likely to produce harmful and specific environmental and social impacts assessment is required to the project site. The impacts can be minimized by the application of mitigation measures presented in an ESMP.
- The projects of category 3 cause no significant negative environmental and social impacts and do not require environmental assessment.
- The projects of category 4 involve the investment of the Bank's funds by financial intermediaries in subprojects which may have negative environmental or social impacts. The specific requirements for this type of project include the IF capacity assessment to take into account the environmental and social aspects.

On the environmental categorization issue, program to build resilience for food and nutrition security in the horn of Africa (HOA) is classified category 2 because it has construction of water resources management and livestock infrastructures that are likely to result the negative impacts on the environment.

The program has a regional character and therefore some subprojects will perhaps affect neighboring countries in particular infrastructure and rangeland management sub-projects. Consequently, the countries which will be affected will be notified prior to the implementation according to the Bank policy. IGAD must then facilitate consultations between the countries concerned and have the endorsement of the country affected before the implementation of the sub-projects.

In this program, the resettlement policy of the Bank will not be applied in that program because it does not plan the subprojects which will cause the displacement of people and it is a community-based program. Water resources that will be available will be exploited

by the communities and therefore, the beneficiaries will be associated in the identification of the site. The infrastructures such as the markets for livestock, clinics, slaughter houses, etc. must be constructed on government lands and made available to communities. Countries will then have to identify the sub projects sites in areas which do not harm the population.

The program plans to develop the sub-projects of irrigation for agricultural development. These projects will probably use chemical products such as pesticides or chemical fertilizers. The livestock protection against parasites will also use pesticides that can damage the environment. The environmental and social impacts assessment of this type of subproject should refer to Bank guidelines related to pesticides and prepare an integrated management plan of pesticides. These pesticides may have significant ignorant negative effects on human health, should not affect non-target organisms and should be effective on the target insects. The assessment will provide security measures since the transport, storage and the application in accordance with the directives of the WHO and FAO in the matter.

The program will be implemented in the areas where are located the national parks, natural reserves and classified forests. The choice of sites will not affect the natural habitats. However, in some areas, the implementation of water points may be the sources of conflicts between livestock and animals of natural habitats. In these conditions, the program plans to build water points for animals of their habitats. Moreover, the choice of sites should not affect negatively the natural habitats.

4.3.9. The African Development Bank (AfDB) Safeguards Policy Requirements

All African Development Bank financed projects must undergo environmental and social impacts screening as per the Bank's Environmental and Social Safeguards Policy. As such, the program to build resilience for food and nutrition security in the horn of Africa (HOA) - construction of water resources management and livestock infrastructures will be implemented according to the Bank Operational Environmental and Social Safeguards Policy. This ESMF has been designed to address environmental and social impacts anticipated from the implementation of this project. In this section the AfDB's safeguards

policies and their applicability are looked at. The AfDB's 5 Operational Safeguard Policies are outlined below and summarized in the table below and thereafter a determination has been made on the safeguards that will be triggered as a result of: (1) Environmental Assessment (OS1); (2) Involuntary Resettlement including Land Acquisition, Population Displacement and Compensation (OS2); (3) Biodiversity and Ecosystem Services (OS3); (4) Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource efficiency (OS4); and, (5) Labour Conditions, Health and Safety (OS5)

Summary of AfDB Operational Safeguards objectives including when they are triggered

OPERATIONAL SAFEGUARD	OBJECTIVE	TRIGGER FOR THE POLICY
OS1 Environmental Assessments	<ul style="list-style-type: none"> To identify and assess the environmental and social impacts (including gender) and climate change vulnerability issues of Bank lending and grant financed operations in their area of influence To avoid or if not possible minimize, mitigate and compensate for adverse impacts on the environment and on affected communities; To ensure that affected communities have timely access to information in suitable forms about Bank operations and are consulted meaningfully about issues that may affect them 	This OS is triggered through the Environmental and Social Screening Process. It assists in the categorization of the project in a Category based upon its potential environmental and social risks and impacts. These potential risks and impacts include physical, biological, socio-economic, health, safety, cultural property, transboundary impacts and global impacts including Greenhouse Gas (GHG) emissions and vulnerability to climate change effects.
OS2 Involuntary Resettlement: Land Acquisition, Population Displacement and Compensation	<ul style="list-style-type: none"> To avoid involuntary resettlement where feasible, or minimize resettlement impacts where involuntary resettlement is unavoidable by project designs; To ensure that displaced people receive significant resettlement assistance, preferably under the project, so that their standards of living, income earning capacity, production levels and overall means of livelihood are improved beyond pre-project levels; To set up a mechanism for monitoring the performance of involuntary resettlement programs in Bank operations and remedying problems as they arise so as to safeguard against ill-prepared and poorly implemented resettlement plans 	<p>This OS is triggered if projects require the involuntary acquisition of land, involuntary acquisition of other assets or restrictions on land use and on access to local natural resources which result in:</p> <ul style="list-style-type: none"> Relocation or loss of shelter by the people in the project area of influence; Loss of assets or restriction of access to assets including national parks, protected areas or natural resources; or Loss of income sources or means of livelihood due to the project, whether or not the PAPs are required to move.
OS3 Biodiversity and Ecosystem Services	<ul style="list-style-type: none"> To preserve biological diversity by avoiding, or if not possible, reducing and minimizing impacts on biodiversity; In cases where some impacts are unavoidable, to endeavor to reinstate or restore biodiversity including, where required, the implementation of 	This OS is triggered if a project is to be located in a habitat where there may be potential biodiversity impacts or in areas providing ecosystem services upon which potentially affected stakeholders are dependent for survival, sustenance, livelihood or

	<p>biodiversity offsets to achieve “not net loss but net gain” of biodiversity;</p> <ul style="list-style-type: none"> • To protect natural, modified and critical habitats; and • To sustain the availability and productivity of priority ecosystem services to maintain benefits to the affected communities and to sustain project performance. • To inhibit introduction of new organisms into a local environment 	<p>primary income, or which are used for sustaining the project. It is also triggered if the project is designed to extract natural resources as a main purpose (e.g. plantation forestry, commercial harvesting, agriculture, livestock, fisheries and aquaculture). It is also triggered where there is extensive interference with the ecosystem including introduction of new organisms not endemic to the locality</p>
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OPERATIONAL SAFEGUARD	OBJECTIVE	TRIGGER FOR THE POLICY
OS 4: Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials	<ul style="list-style-type: none"> • To manage and reduce pollutants likely to be caused by a project so that they shall not pose harmful risks to human health and the environment, including hazardous, non-hazardous waste and GHG emissions. • To set a framework for efficiently utilizing all a project’s raw materials and natural resources especially focusing on energy and water. 	<p>This OS is triggered if the project is likely to cause significant adverse environmental or social impacts owing to the emission of pollutants, waste or hazardous materials covered by national legislation, international conventions or internationally recognized standards or by unsustainable resource use. It is also triggered by potentially significant levels of GHG emissions.</p>
OS 5 Labour Conditions, Health and Safety	<ul style="list-style-type: none"> • To protect the workers’ rights and to establish, maintain, and improve the employee – employer relationship; • To promote compliance with national legal requirements and provide due diligence in case national laws are silent or inconsistent with the OS; • To provide broad consistency with the relevant International Labor Organization (ILO) Conventions, ILO Core Labor Standards and the UNICEF Convention on the Rights of the Child in cases where national laws do not provide equivalent protection; • To protect the workforce from inequality, social exclusion, child labor and forced labor; and • To establish requirements to provide safe and healthy working conditions 	<p>This OS is triggered if the project involves the establishment of a temporary or permanent workforce.</p>

The OS1 Policy is a requirement for all projects. Environmental Assessment (EA) of projects proposed for Bank financing helps to ensure that they are environmentally sound and sustainable hence improving decision making. The EA is a process whose breadth,

depth, and type of analysis will depend on the nature, scale, and potential environmental impact of the proposed investments and leads to the Categorization of the project hence determining the level of EA required – full Environmental and Social Impact Assessment (full ESIA), Strategic Environmental and Social Assessment (SESA), Environmental and Social Management Plan (ESMP) or Environmental and Social Management Framework (ESMF). The EA process takes into account the natural environment (air, water, and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples, and cultural property) and transboundary and global environmental aspects.

The environmental and social impacts caused by the program to build resilience for food and nutrition security in the horn of Africa (HOA) - construction of water resources management and livestock infrastructures will come from the activities resulting from implementation of its various components. However, since the exact location of these investments will not be identified before bank appraisal of the project, the EA process has resulted in the preparation of this Environmental and Social Management Framework (ESMF) rather than an Environmental and Social Management Plan (ESMP) or Environmental and Social Impact Assessment (ESIA) Reports or Statements. This ESMF has established determined the environmental and social impacts during implementation of the program to build resilience for food and nutrition security in the horn of Africa (HOA) - construction of water resources management and livestock infrastructures activities, and has set out mitigation measures, monitoring and institutional framework needed during the implementation of the activities, to eliminate or offset adverse environmental and social impacts, or reduce them to acceptable levels.

Operational Safeguard 1 further requires that the ESMF report must be disclosed as a separate and stand-alone document by the Government of South Sudan and the AfDB as a condition for further Bank processing. The disclosure should be both in South Sudan where it can be accessed by the general public and local communities and at the Banks website and the date for disclosure must precede Bank approval of the project. The EA enables the Africa Development Bank system to assign the project to a category in view of the project's impacts.

5. PROGRAM TO BUILD RESILIENCE FOR FOOD AND NUTRITION SECURITY IN THE HORN OF AFRICA (HOA) - CONSTRUCTION OF WATER RESOURCES MANAGEMENT AND LIVESTOCK INFRASTRUCTURES

5.1. Proposed development objectives

The development goal of the the program to build resilience for food and nutrition security in the horn of Africa (HOA) follows the decision of the African Development Bank at the February 2019 roundtable on financing the Climate Investment Plan for the Sahel region (PIC-RS 2018 -2030). The objective was to support the implementation of the “Priority program to catalyse climate investments in the Sahel (PPCI 2020-2025)”. This was made operational by the AfDB's commitment to support a regional program for CILSS countries (Western Sahel) and a regional program for IGAD countries (Eastern Sahel).

5.2. Project description

The project will be implemented in two states namely Eastern Equatoria and Northern Bahr El Ghazal. Although other states with different projects, may be considered, the initial focus is construction of water resources management and livestock in fractures. The specific counties within these states will be confirmed at appraisal. The design of the project is to have 2 components i.e. increase agricultural productivity/production and marketing and construction of water reservoir/haifr/wells and livestock infrastructure.

6. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

6.1. Positive environmental and social impacts

The program to build resilience for food and nutrition security in the horn of Africa (HOA) - increase agricultural productivity/production and marketing and construction of water reservoir/haifr/wells and livestock infrastructure is being developed aimed at improving production, stabilizing and improving sustainable rural livelihoods, enhancing food and nutritional security and contributing to poverty reduction in South Sudan. The main

objective of this project is to contribute to poverty reduction, economic growth and building of community and household resilience to climate change.

The outputs of this project will translate into multiple positive economic and social outcomes whose indicators include: (i) increased agricultural productivity and production; (ii) increased marketing opportunities; (iv) minimized post-harvest losses of agricultural produce and subsequent increased food and nutritional security; (v) improved household and community incomes hence improved living standards, food security and improved nutrition through diversified food supplies; (vi) improved transportation infrastructure and marketing as well as storage facilities for the agricultural produce; (vii) increased employment opportunities both directly and indirectly by people employed during the development works as well as those who will be employed in agro-processing, marketing, sale of farm inputs, etc.; (viii) improved agricultural production skills through training and extension services; (xi) enhanced environmental management skills through capacity building of staff involved in the project; and, (xii) improved water infrastructure and livestock.

6.2. Project beneficiaries

This project will be implemented in 2 States of South Sudan –Eastern Equatoria and Northern Bahr El Ghazal. The two states have a total of approximately 1.5 million people in their respective counties. Assuming the project may target 3 counties in each state, this is likely to benefit at least 571,014 people. If this was achieved, this project will have a huge economic impact in South Sudan.

6.3. Mainstreaming of environmental, social and gender issues

Environmental and social screening helps in the identification of the main environmental and social challenges with the project area. As such it helps in mainstreaming of environmental and social in the project at the design stage. Mainstreaming of environmental, social and gender issues constitute the design of this project hence will be integral in the implementation and monitoring of the proposed project through a list of identified indicators. The project is earmarked for implementation in two states in the

Northern and Eastern part of South Sudan. These areas just like most other parts of South Sudan, experience high prevalence levels of poverty and environmental degradation besides poor agricultural production systems that lead to low agricultural outputs. The areas also suffer from poor agricultural management practices and poor water and land management systems that lead to environmental degradation as well as poor crop/forage production. Environmental challenges include deforestation, soil degradation, climate change, loss of biodiversity and land degradation. The project has to consider including elaborate catchment management system as well as soil and water conservation programmes to improve land management practices and improve natural resources.

6.4. Socio-Economic Aspects

The outputs of this project will translate into multiple positive economic and social outcomes whose indicators will include: (i) improved household and community incomes; (ii) improved nutritional and health standards of the population hence improving social well-being that is likely to lead to cutting down of household health budgets; (iii) improved regional/states and national incomes through international trade in agricultural and livestock produce; (iv) increased employment opportunities both directly and indirectly within the targeted communities; (v) improved agricultural production skills through training and enhanced capacity; (vi) improved food storage and water resources management and livestock infrastructure.

6.5. Gender and youth Aspects

The Design of the Project is systematically geared towards engaging women and youth without applying any gender discrimination mechanisms. As such the project will contribute to active gender equality and will not lead to unintended negative gender impacts, such as exclusion. Gender perspectives have been integrated into project formulation in line with the South Sudanese National Gender Strategy while taking due cognisance of the Bank's Gender Policy.

6.6. Involuntary resettlement

Up to this point, there are no indication that the project will require land acquisition. It is assumed that the project sites will be areas already designated for the increase agricultural productivity/production and marketing and construction of water reservoir/haifr/wells and livestock infrastructure while development of marketing and agro-processing infrastructure will be done in areas previously set aside as markets and for urban development units. Any requisitions that will require forced resettlement may not be massive to cause any serious resettlement alarm.

6.7. Climate change and Green Growth:

The Project will undergo climate change risks screening and adaptation measures proposed. Broadly, though, this project is likely to be classified as **Category 2** according to the Bank's Climate screening score card in view of the possible impacts it is likely to cause or how it is likely to be impacted on by climate change. The design review will include climate change risks and proposal of adaptation measures. Risk management and adaptation options will be integrated into project implementation. Catchment management and land and water conservation programmes will be incorporated as part of the climate change resilience programme. The proposed project interventions are likely to improve adaptation measures required in land and water management sub-sectors to secure and improve agricultural productivity against climate change impacts through enhancement of water management practices.

6.8. Negative impacts

Most of the activities of the program to build resilience for food and nutrition security in the horn of Africa (HOA) - increase agricultural productivity/production and marketing and construction of water reservoir/haifr/wells and livestock infrastructure will not cause negative environmental impacts because they are mainly environmentally friendly activities. The activities that will have negative impacts include: (1) construction of modern market infrastructures; (2) construction of water infrastructure facilities; and, (3) improvement of transport infrastructure. Broadly, though, all development projects must

have negative impacts, environmentally, socially and even affect cultural values and set ups. Identified negative impacts anticipated include: (i) vegetation, habitat and biodiversity destruction and loss during the development and construction of infrastructure; (ii) generation of solid wastes as a result of excavations during construction works; (iii) compaction of soils and destabilization of the geological balance during infrastructure development; (iv) solid waste and wastewater generation due to increased populations in construction sites and market places; (v) dust, air quality and noise pollution during construction works arising out of construction works and transportation of both construction materials and wastes; (vi) threats of occupational health and safety, especially during construction works; (vii) soils, rivers/streams and wetlands pollution from increased use of agro-production chemicals due to increased agricultural production activities; (viii) threats of transmissions of HIV/AIDs and other communicable diseases due to increased social interactions and congregations.

6.9. Analysis of Project Alternatives

This ESMF study sought also to consider possible alternatives of the the project. These alternatives included among other considerations the alternative sites and alternative activities as well as the different products, materials, and technologies. This study has therefore sought to identify and assess alternatives to the proposed developments so as to have the best working models that may have none or those that have the least minimal negative effects. The selection of the best alternative can be done based on minimal negative impacts and through a cost benefit analysis.

The “No Project” alternative model is the best alternative since it helps the proponent and various decision making levels to approximate the impacts of project implementation against the non-implementation thereby making the right decision regarding project implementation. The second best alternative which is approximate to the “No Project Model” is the relocation of the project to other sites.

6.9.1. *The “No Project” Alternative*

This model helps the proponents to measure impacts from the project baseline information and helps in the assessment of impacts in regard to the project’s activities. This alternative implies the project does not proceed thereby maintaining the status quo. The status of the environmental resources neither improves nor worsens since the state of the resources is not interfered with at all. However, project implementation could improve food security, increase household incomes and help to provide employment as well as upgrading the county, state and national economies. The ‘No Alternative’ has various negative and possibly long term impacts to the states which include: (i) the local populations continue to suffer due to poor nutrition; (ii) no incomes hence sustained poverty situations; (iii) no infrastructure improvement; (iv) low agricultural production; (v) sustained poverty levels; (vi) no employment opportunities; (vii) continued food insecurity situations; (viii) limited water supply; (ix) no efforts to improve livestock production; (x) no efforts to improve the environment.

The economic level of the project area is low and need to be improved so as to promote the fiscal outputs of the area. The ‘No Project Alternative’ is the least preferred option since the costs far much outweigh the benefits to be accrued.

6.9.2. *Alternative Location*

Alternative project location seems to have the same impacts as the No Project Alternative. It means transferring project benefits elsewhere leaving people of these areas the same way they have been hence does not change their situation nor does it improve their well-being.

7. PROPOSED MITIGATION AND ENHANCEMENT MEASURES TO ADDRESS THE IDENTIFIED NEGATIVE IMPACTS

The negative impacts of the project must to be addressed. Mitigation measures and enhancement mechanisms for the program to build resilience for food and nutrition security in the horn of Africa (HOA) - increase agricultural productivity/production and marketing and construction of water reservoir/haifr/wells and livestock infrastructure are outlined in this ESMF. However, further details of mitigation measures of the negative environmental

and social impacts will be elaborated in the Environmental and Social Management Plan (ESMP) as well as in the site-specific environmental impact assessment reports. The overall goal is to ensure adherence to laws and regulations governing environmental management in South Sudan and as per the global requirements to ensure long term environmental and social sustainability. Public education and awareness as well as sensitization to enhance long term sustainability of environmental conditions as well as environmental goods and services are important aspects of the mitigation plans.

The overall objective of environmental and social monitoring will be 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 to ensure that project activities comply with and adhere to environmental provisions and standard specifications of the Bank and those of the Government of South Sudan. The overall responsibility of ensuring that environmental and social impacts are addressed and environmental and social monitoring is carried out will lie with the line ministries working in joint collaboration with the Ministry of Environment and Forestry. The principal line Ministries will also work in conjunction with other relevant departments and entities responsible for ensuring environmental and social compliance.

Here below are the possible negative impacts that have been identified and the mitigation and enhancement measures to address the impacts during the implementation of the proposed project:

- (i) **Loss of vegetation and destruction of habitats and biodiversity:** There is anticipated levels of increased clearing of vegetation, destruction of natural habitats and loss of biodiversity during the development phase of the project for construction works facilities and improvement of transportation networks. However, the anticipated destruction will not be massive because only small areas will be cleared for construction. Besides, the project is expected to concentrate on areas occupied by the existing infrastructure.

Mitigation: To mitigate against these, measures that should be taken should include: (i) where possible, the clearing of vegetation, particularly of indigenous trees be avoided as much as possible during construction, and the clearing needs to be carried out only where necessary; (ii) following clearing, land should be landscaped and reclaimed by planting more trees and other vegetation types; (iii) clearing and construction should not be done in areas identified as sensitive habitats such as wetlands, culturally protected areas, unique and special habitats, or any areas protected by law unless special authorisations are sought and granted; and (iv) where possible, buffer the special, sensitive and ecologically important habitats to minimize their destruction.

(ii) Generation of solid wastes due to excavations during construction:

Construction works can lead to generation of solid wastes and debris. Such wastes need to be managed.

Mitigation: (i) put in place appropriate waste management mechanisms for solid wastes generated; (ii) the solid wastes must be appropriately transported to an identified site for disposal; (iii) educate and sensitize the workers on appropriate management measures for such wastes and that they must be responsible for their own environments.

(iii) Soil Compaction and destabilisation of the geological balance: The use of heavy machinery during the construction work within the project areas is likely to lead to compaction of the soil structure which may lead to reduced water infiltration capacities and subsequently resulting in increased run-off. The increased run-off may lead to soil erosion and land degradation. The run-offs may lead to contamination of water systems in the nearby streams and rivers. It may also affect soil-water balance and subsequently interfere with general hydrological cycle.

Mitigation: To mitigate against the consequences of soil compaction: (i) minimize use of heavy machinery and control their movements and other equipment and movements away from designated transportation and operational areas; (ii) unnecessary vehicular and machinery movements should be avoided as much as possible; (iii) reclaim and re-vegetate excavation sites once work is completed to reduce run off.

(iv) Increased solid waste and wastewater generation due to increased population and agro-processing activities.

During the operation phase of the project, there is likelihood of increased human concentrations in project areas. The high numbers of people are likely to result in increased waste generation both solid and wastewater. The project activities are likely to generate wastes. Such wastes generated must be appropriately managed. Some of the possible mitigation measures are given here below.

Mitigation: (i) development of waste management systems such as construction of latrines and toilets will be required; (ii) there will be need for public education and sensitization against poor disposal of wastes.

(v) Pollution of Soils, Rivers and Wetlands due to increased use of agro-chemicals and salinization:

This project is aimed at increasing agricultural productivity and production as well as livestock facilities and water infrastructure. As such, there is likelihood of increased use of agricultural chemicals to improve productivity as well as saline groundwater. If not appropriately used and well managed such chemicals and salinity may find their way into the soils, rivers and wetlands hence degrading the environment. These may ultimately lead to potential degradation of the water quality especially for downstream users and adversely affect the aquatic life. Pollution of water sources may lead to eutrophication due to heavy use of nitrogenous chemicals. There will be need to have these well addressed during the project implementation.

Mitigation: (i) ensure proper and regular checks on the equipment used to apply chemicals to ensure they are well maintained and in good working condition to prevent any leakages and spillages; (ii) ensure that used chemicals are well managed and guarded against reaching sensitive areas such as wetlands around the project area; (iii) ensure usage of the right chemical types and in right quantities; (iv) ensure that only the right chemicals and in the right quantities are used; (v) put measures to ensure proper disposal of used chemicals and other wastes that may include incineration; (vi) good extension services will be

required; (vii) regular and appropriate education and public awareness in the use of chemicals and (viii) regular monitoring of water quality.

- (vi) **Pollution: Noise, Dust and Air Quality Concerns:** The construction activities mostly the excavation and transportation of construction materials are likely to generate a significant amount of dust as well as emitting smoke and fumes from engines and oil spills that will lead to pollution of air, water and other environmental resources. Other pollution agents are likely to be agro-chemicals. There will definitely be need to control and guard against such pollution.

Mitigation: This could be mitigated against by: (i) ensuring that all vehicles transporting raw materials especially soil should be covered and avoid overloading to minimize dust being blown anyhow; (ii) the workers in dusty areas should be provided with requisite personal protective equipment such as dust masks and dust coats for preventive and protection purposes; (iii) the movement and speed of the construction vehicles should be controlled and properly managed; (iv) the removal of vegetation should be avoided and denuded surfaces should be adequately re-vegetated and dusty roads sprinkled with water; (v) noisy machinery and vehicles should be fitted with proper silencers to minimise noise emissions; (vi) where necessary, ensure good and appropriate selection of construction machinery and equipment; (vii) the amount of blasting in the quarries should be controlled where necessary; (viii) sprinkle water in construction yards, on dusty roads and soil heaps to keep down the dust produced; (ix) ensure the construction work takes the shortest time possible, in addition, the activities generating dust should be carried out in calm weather; (x) ensure the noise levels are kept at the minimum acceptable levels and the construction activities are confined to the working time limits; (xi) ensure chemicals are well handled and properly stored while disposals should be in accordance with prescribed procedures; (xii) vehicles and machinery should be repaired in designated locations and waste-oils appropriately handled.

- (vii) **Threats of occupational health and safety:** Constructions and operation activities are likely to result in work hazards. There are possibilities of accidents and other hazards that must be guarded against.

Mitigation: (i) The use of proper personal protective equipment and other protective gears including appropriate clothing, use head covering gears and use of masks to prevent inhaling of dust and other chemicals; (ii) public education and sensitization; (iii) well labelled and conspicuously placed warnings such as pits, etc.; (iv) provision

of First Aid Kits that will be clearly marked and conspicuously placed; (v) provision of latrines or toilets; (vi) provision of clean drinking water.

(viii) Transmission of HIV/AIDs and other communicable diseases: HIV/AIDS remains a major challenge where there are increased human interactions. The proposed project is likely to star up economic activities hence increasing social activities and human interactions. As such the prevalence of HIV/AIDS in the area could increase due to free-flow and high influx of people particularly during the construction and operation phase of the project. The influx of people into the project areas may result in increased infections of diseases, particularly HIV/AIDS and some communicable diseases. During project implementation activities such trade and employment are also likely to increase hence increased interactions consequently leading to increased infections.

Mitigation: Challenges due to infections could be addressed through: (i) enhancing education and sensitization of workers and the local communities on the dangers and prevalence of diseases; (ii) regular sensitization campaigns and monitoring of the spread diseases; (iii) development of brochures and other materials that will convey information about diseases and infections; (iv) regular provision of adequate prevention measures such as condoms; (v) regular counselling and testing; (vi) provision of drugs such as anti-retriviral drugs (ARVs).

8. PROPOSED ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

8.1. Summary of the project impacts and the intended mitigation measures

Activities forming sources of impacts	Impacts identified	Nature of impact (negative/positive)	Duration of impact	Scope of impact (local, regional or global)	Level of risks associated with the impacts	Proposed mitigation measures	Capacity building required	Reporting frequency	Responsibility
Development of water infrastructure and agricultural facilities	Vegetation loss, habitat destruction and loss of biodiversity	-	One – Two years	Local	Moderate	<ul style="list-style-type: none"> • Minimise vegetation clearing • Landscape and reclaim • Control soil erosion • Avoid sensitive habitats • Buffer areas of ecological importance 	Sensitisation and Public awareness campaigns	Weekly as well as monthly	Resident Engineer/ Supervising Engineer And Line ministries
	Soil compaction, destruction of geological balance	-	One – Two Years	Local	Moderate	<ul style="list-style-type: none"> • Minimize use of heavy machinery • Restrict machinery and vehicular movement • Reclaim and rehabilitate 	Sensitization and public awareness	Monthly and quarterly	Resident Engineer/ Supervising Engineer And Line ministries
	Generation of solid wastes as a result of excavations during construction works	-	One – Two years	Local	Moderate	<ul style="list-style-type: none"> • Develop waste management system • Ensure proper and appropriate management and transportation of wastes • Public education and sensitization awareness 	Sensitization and public awareness	Daily, weekly and monthly	Resident Engineer/ Supervising Engineer And Line ministries

Activities forming sources of impacts	Impacts identified	Nature of impact (negative/positive)	Duration of impact	Scope of impact (local, regional or global)	Level of risks associated with the impacts	Proposed mitigation measures	Capacity building required	Reporting frequency	Responsibility
Development of water infrastructure and agricultural facilities	Increased solid wastes and wastewater generation	-	Project period	Local	Moderate to high	<ul style="list-style-type: none"> • Develop waste management system such as latrines and toilets • Public awareness and education 	Sensitization and public awareness	Quarterly	Resident Engineer/ Supervising Engineer And Line ministries
	Dust, air and noise pollution	-	One year	Local	Moderate	<ul style="list-style-type: none"> • Ensure waste transportation vehicles are covered • Provide appropriate PPEs • Control vehicular speed • Rehabilitate denuded areas • Sprinkle water on dusty surface and places • Appropriately choose working machinery and vehicles • Limit blasting • Speed up construction works • Control noise levels • Ensure proper handling of chemicals 	Sensitization and public awareness	Daily and Weekly	Resident Engineer/ Supervising Engineer And Line ministries

						<ul style="list-style-type: none"> • Provide silencers 			
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Activities forming sources of impacts	Impacts identified	Nature of impact (negative/positive)	Duration of impact	Scope of impact (local, regional or global)	Level of risks associated with the impacts	Proposed mitigation measures	Capacity building required	Reporting frequency	Responsibility
Development of water infrastructure and agricultural facilities	Threats of occupational health and safety	-	One Year	Local	Moderate	<ul style="list-style-type: none"> • Use of appropriate PPEs • Public education and sensitization • Well labelled and conspicuously placed warnings • Provision of First Aid Kits • Provision of clean drinking water 	Public education	Weekly or monthly	Resident Engineer/ Supervising Engineer And Line ministries
	Increased chances transmission of HIV/AIDS and other communicable diseases	-	The entire project period	Local and national	High	<ul style="list-style-type: none"> • Enhanced public education and awareness • Regular sensitization campaigns and monitoring • Development and distribution of education materials • Regular provision of protective materials such as condoms 	Public education and sensitization	quarterly	Resident Engineer/ Supervising Engineer And Line ministries

						<ul style="list-style-type: none"> • Regular counselling and testing • Provision of requisite drugs such as ARVs 			
Activities forming sources of impacts	Impacts identified	Nature of impact (negative/positive)	Duration of impact	Scope of impact (local, regional or global)	Level of risks associated with the impacts	Proposed mitigation measures	Capacity building required	Reporting frequency	Responsibility
Development of water infrastructure and agricultural facilities	Increased employment opportunities	+	Two years	Local, State and National	None	None	None	Quarterly	Resident Engineer/ Supervising Engineer And Line ministries
	Increased local trade	+	Two years	Local	None	None	None	Quarterly/ Annually	Resident Engineer/ Supervising Engineer And Line ministries
	Improved local construction skills	+	Two years	Local, State National	None	None	None	Annually	PIU/MAFS
Putting in place social and economic enabling infrastructure	Enabler infrastructure and facilities (hygiene, public health, improved environment, improved security, etc.)	+	Extensive period	Local/National	High positive impacts	No mitigation measures required	<ul style="list-style-type: none"> • Skills in agro-processing • Skills in water and sanitation and basic hygiene 	Annually	Resident Engineer/ Supervising Engineer And Line ministries

Activities forming sources of impacts	Impacts identified	Nature of impact (negative/positive)	Duration of impact	Scope of impact (local, regional or global)	Level of risks associated with the impacts	Proposed mitigation measures	Capacity building required	Reporting frequency	Responsibility
Strengthening the capacity of relevant ministry officials	Enhanced capacity of relevant ministry officials	+	Extensive period	Local/National	High positive impacts	No mitigation measures required	<ul style="list-style-type: none"> • Skills in agricultural production 	Annually	Various ministries

							<ul style="list-style-type: none"> • Skills in extension services • Skills in environmental and land management • Skills in land use planning • Skills in integrated pest management systems • Skills in business development 		
Engaging and strengthening capacity of private sector and civil society participants	Enhanced capacity of various stakeholders in the agricultural sector	+	Extensive periods	Local/National	High positive impacts	No mitigation measures needed	<ul style="list-style-type: none"> • Skills in agricultural production processes • Skills in agro-processing • Skills in business development 	Annually	Responsible ministries and development partners

8.2. ESMP monitoring programme

Once project implementation starts, there is need to regularly monitor the implementation progress of the Environmental and Social Management Plan. The overall objective of environmental and social monitoring is to ensure that mitigation measures are being implemented and are effective. It 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 Bank and those of Government of South Sudan.

The overall responsibility of the environmental and social monitoring during the implementation of this project will lie with the line ministries, working in close collaboration with the Ministry of Environment and Forestry as well as other entities responsible for environmental management and social protection. However, it is anticipated that these ministries still lack adequate capacity in terms of environmental management hence there will be need for capacity building. A good number of key staff involved in the implementation of the project will 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 ESMP monitoring will involve monitoring compliance with regulations, managing worksites, executing specific environmental and social works and seeking solutions to emerging environmental problems. On-site monitoring of the ESMP will be the responsibility of the Project Implementation Unit under the Project Coordinator and working closely with the responsible officers at the states and counties. Environmental compliance will be overseen by the responsible officers from the Ministry of Environment and Forestry and their officers at the counties and state governments. The ESMP monitoring team will ensure regular reporting, which will be on a monthly or quarterly basis depending on the aspects being monitored to avoid any serious environmental 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, (iv) the effectiveness of environmental and social measures adopted. During the operational phase of the project, there will be need to monitor and manage: (v) agro-chemicals used in production; (vi) wastes generated from the proposed projects.

The ESMP monitoring programme is proposed for implementation at two-levels – the supervisory activity carried out by the control or supervision missions of the African Development Bank and the regular monitoring activities conducted by the line ministries or its agents in collaboration with officers from the Ministry of Environment and Forestry and responsible entities at the county and state levels. The regular monitoring will ensure that site activities are conducted in compliance with agreed upon local environmental standards under the Environmental Regulations in South Sudan. They will report regularly to the executing agency, the states. The supervisory or control missions may be once every six months and their role will include: (i) reviewing the contractor's detailed worksite ESMP or ESIA and its specific procedures; (ii) ascertaining assessment of the negative impacts identified; (iii) ascertaining the effectiveness of proposed measures; (iv) studying specific applicability conditions for the proposed measures; (v) monitoring the implementation of measures during the works implementation phase; (vi) monitoring the recommended measures; (vii) proposing remedies in the event of occurrence of major impacts; and (viii) conducting environmental compliance and assessment at the end of the project. Using 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).

9. CONSULTATIONS AND PUBLIC PARTICIPATION

Consultations and public participation is a very important aspect of the environmental and social assessments. It is a requirement by the legal and regulatory frameworks in most countries and a policy requirement by most development institutions. The processes facilitate understanding of the project and its impacts by the project beneficiaries.

9.1. Rationale for consultation and disclosure

During the process to prepare this ESMF there were limited consultations and public participation. As such, it is anticipated that these processes will be carried out during the subsequent phases of the project development process especially during the appraisal. The public consultation and public participation process is a crucial mechanism that will inform the public, key stakeholders, interested partners and those to be affected by the project about the purpose and aims of the project and the key activities that will be carried out during the development and implementation phases of the project. Possible impacts of the project are also discussed while soliciting inputs from the participants. Continued engagement with stakeholders and project beneficiaries facilitates regular communication and updates that enable modifications and alterations as well as implementation of proposed mitigation measures.

The objectives of the stakeholder consultation and public participation include among others: (i) to provide an opportunity for the public, more so those to be directly affected to get clear, accurate and comprehensive information about the proposed project and the anticipated environmental impacts; (ii) to provide an opportunity for the public and the project beneficiaries to give their views, raise their concerns regarding the project and also give possible alternative arrangements that may assist in the development of the project; (iii) to provide the project beneficiaries an opportunity of suggesting ways of avoiding, reducing, or mitigating negative impacts or enhancing positive impacts of the proposed project activities; (iv) to enable the project proponents to incorporate the needs, preferences and values of project beneficiaries into the proposed project/programme; (v) to provide opportunities to avoid and resolve disputes and reconcile conflicting interests; and, (vi) to enhance transparency and accountability in decision making.

9.2. Stakeholder identification and analysis

In order to develop an effective stakeholder engagement, it is necessary to determine the key stakeholders and hold dialogues to understand their priorities and objectives in relation to the proposed project/programme. This project will touch on the key issues of economic development through increase in agricultural productivity/production and marketing and construction of water reservoir/haifr/wells and livestock infrastructure and nutritional security. As such there are a wide range of stakeholder. Among the key stakeholders will include officers from the line Ministries, and various development partners involved in Agriculture and water, Non-Government Organizations (local and international) and civil society organizations. The most important stakeholders, however, will include the project beneficiaries and environmental management organizations.

9.3. Methodology of engaging stakeholders

In order to effectively engage and consult various stakeholders, several methods are used. Among the most common methods are: (i) public consultative meetings, particularly with communities and other large numbered stakeholders; (ii) workshops which might be organised at the identified states and county headquarters; (iii) focused group discussions (FGDs); (iv) interviews with different key informants in relation to the proposed project/programme; (v) printing and distribution of materials that help relay information to stakeholders to widen their understanding of the project and its implications; (vi) physical site visits and inspections that may also include discussions with community leaders and community members; (vii) identification of vulnerable communities that may be impacted on more with the project; (viii) due consideration of gender and various age groups during consultative processes.

9.4. Possible key issues for consideration during stakeholder engagements

A number of issues are identified that maybe useful during stakeholder engagements include:

9.4.1. *Land acquisitions and compensation*

Should there be need for land acquisition for the development of the proposed projects.
There will need to know whether there will be involuntary resettlement needed, etc.

9.4.2. *Identification of ecologically sensitive sites*

This will be with regard to identifying areas that are protected by national laws and international conventions such as forest reserves, Ramsar sites, important migration routes, etc.

9.4.3. *Identification of important cultural sites*

These may include cultural ritual sites, cemeteries

9.4.4. *Environmental impacts*

These will be need to discuss both negative and positive environmental and social impacts of the project.

9.4.5. *Environmental/biodiversity issues*

These may include issues of destruction of natural environment including damage to vegetation, views from conservationists, loss of biodiversity of biological and economic importance, etc.

9.4.6. *Socio-economic considerations*

During stakeholder engagements and public consultations, projects are analysed in view of their socio-economic impacts. What positive impacts is the project going to have? How is the project going to influence social well-being as well as economic well-being? What are the potential complementary initiatives? Employment opportunities that will be created by the project, etc. etc.

9.4.7. *Socio-cultural issues*

Consideration of gender mainstreaming, women and youth empowerments, identification of vulnerable groups such as poor women, the elderly, the people with

disabilities, spreading of diseases (especially HIV/AIDS and other communicable diseases as well as non-communicable disease are of utmost consideration), improvement of life quality/living standards, etc.

9.4.8. *Disruption of normal life*

Is the project going to interference with and disrupt daily economic activities such as closure of roads, change in normal lifestyles, etc.

9.4.9. *Trans-boundary issues and cumulative impacts*

During stakeholder engagements and public consultations, issues such as possible trans-boundary impacts of the project may be reviewed. Cumulative impacts such contribution to changes in climatic conditions are of great importance.

9.4.10. *Occupational health and safety*

Possible occupational health challenges and safety of workers during the project development phase as well as operational phase are of great importance.

9.4.11. *Bank requirements*

For Bank funded projects, consultation are undertaken with reference to the updated AfDB's Integrated Environmental and Social Impact Assessment (IESIA) Guidance Notes on consultation, participation and broad community support, which also provide guidance on affected communities' involvement in the process of project planning, implementation and monitoring. Consultations are mainly based on stakeholder analysis and are preceded by disclosure of adequate project information and environmental and social information to ensure that participants are fully informed. As mentioned earlier, consultations and public participation is a continuous process during project circle and can begin at an early stage during project preparation and continues as needed.

This is identified as a Category 2 project hence the affected communities and stakeholders will mainly be consulted about the draft environmental and social assessment report and the draft ESMP which is going to be developed using this ESMF as a guide.

10. INSTITUTIONAL RESPONSIBILITY, INSTITUTIONAL ARRANGEMENT AND CAPACITY BUILDING REQUIRED

Successful implementation of an ESMP requires good coordination. Overall, the line ministries will take responsibility for the implementation and management of the ESMP for the the program to build resilience for food and nutrition security in the horn of Africa (HOA) - increase agricultural productivity/production and marketing and construction of water reservoir/haifr/wells and livestock infrastructure. Specifically and on a day to day management, the implementation of the ESMP will be overseen by the Project Implementation Unit (the PIU). The PIU can also be referred to as the Project Coordinating Unit (PCU). The African Development Bank (AfDB), as the Financing Agency will play a significant role in ensuring that environmental regulations are adhered and the mitigation measures are implemented. The PIU or PCU will be headed by the Project Coordinator or the Project Manager who will oversee the day to day running of the project. The Project Coordinator will have a team of experts overseeing the different components of the project. It is recommended that among the experts on board be included a community development expert and an environmental expert.

For purposes of ESMP implementation, the PIU must have an environmental specialist who will oversee its implementation. The PIU will closely liaise with officials from the Ministry of Environment and Forestry to ensure compliance with national environmental regulations in South Sudan.

It is important to note that site-specific ESIAs might be prepared should there be a need for that. The Director of Environment and the project's supervising Engineers as well as their Environmental Officers at local levels will be responsible for ensuring that the environmental and social mitigation measures are implemented. It is proposed that a capacity building programme be included as part of this project to help train senior officers at the ministry and other ministries engaged in the implementation of this project in various aspects of environmental assessments and management.

11. ESTIMATED COSTS TO IMPLEMENT THE ESMF AND THE SUBSEQUENT ESMP AND OTHER RELATED COSTS

These are all costs that will be incurred to implement the requirements or recommendations of this ESMF. The ESMF requires that implementation of the project integrates environmental and social issues for the long term environmental and social sustainability of the project as well as its components and sub-components. Among other things the ESMF recommends the following key issues, namely; preparation of the project's ESMP, preparation of site-specific ESIAs, training and capacity building, reviewing and monitoring mechanisms among other requirements.

Building the capacity of staff from the implementing unit and the line ministries, Ministry of Environment and Forestry as well as from other relevant entities, but more so those who will directly be involved in implementing the project will be very important. This enable them to screen, review and monitor environmental issues in the project to ensure compliance with requirements of the national policies and Acts as well as AfDB safeguard policies. Based on experience from other related assignments the estimated cost for implementing the recommendations of this ESMF will be approximately US\$300,000. Details of these costs are presented in the table below.

The summary of the ESMF costs

No.	Activity	Timeframe	Cost	Responsibility
1.	Preparation of site-specific ESMP/ESIAs	1 st and 2 nd quarters of project implementation	60,000	Line Ministries, MoEF/States/Counties /Contractors
2.	Training of staff from the PIU and other line ministries staff	1 st and 2 nd quarter of project implementation	30,000	Line Ministries, MoEF/States/Counties /Contractors
3.	Training of staff from the Ministry of Environment and Forestry and other relevant entities	1 st year of project implementation	40,000	MOEF
4.	Capacity building of beneficiaries (communities) in land and water management activities	1 st year of project implementation	30,000	Line Ministries, MoEF/States/Counties /Contractors
5.	Support extension work and training of agro-pastoralist communities	1 st year of project implementation	40,000	Line Ministries, MoEF/States/Counties /Contractors
6.	Institutional strengthening and capacity building in environmental and social management	Throughout the project management period	40,000	Line Ministries, MoEF/States/Counties /Contractors
7.	HIV/AIDS mainstreaming and management	Throughout the project period	30,000	Line Ministries, MoEF/States/Counties /Contractors /Public Health
8.	ESMP Monitoring – supervision and control missions	Throughout the project period	30,000	Line Ministries, MoEF/States/Counties /Contractors
9	TOTAL		300,000	

12. CONCLUSIONS AND RECOMMENDATIONS

12.1. Conclusions

This ESMF was prepared based on preliminary environmental and social assessments based on the project components and proposed project activities. This ESMF equips the Line Ministries as well as the AfDB and other relevant partners and other authorities of the Government of South Sudan and several other interested agencies, local administrative agencies plus all stakeholders with relevant and sufficient environmental information about the proposed program to build resilience for food and nutrition security in the horn of Africa (HOA) - increase agricultural productivity/production and marketing and construction of water reservoir/haifr/wells and livestock infrastructure. It is hoped that the South Sudanese authorities in collaboration with other development partners would use this information to evaluate the environmental viability and sustainability of the proposed project and the probable impacts. The proposed development project will have massive economic and social benefits not only to the local communities within the project areas, but is likely to have macro-benefits nationwide, particularly with regard to international trade and foreign exchange earnings and national food and nutritional security.

The negative environmental impacts that have been identified and are associated with the implementation of this project are minimal and highly localized and will be addressed by implementing the mitigation measures proposed to ensure that they pose no threat to the environment and to the communities. As such this project is a Category 2 in the AfDB's Integrated Safeguards System (ISS).

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 and Nutrition among other relevant issues. The multi-disciplinary approach will ensure that emerging issues and challenges are not only adequately addressed but the addressing is done timely and appropriately.

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 based of the recommendations of this ESMF need to be followed so as to address the environmental issues that may arise in the course of the implementation of this project.

Annex I: ESMF Clearance Letter from the Ministry of Environment and Forestry



REPUBLIC OF SOUTH SUDAN
MINISTRY OF ENVIRONMENT & FORESTRY

Office of the Undersecretary of Environment

Date: 13/10/2021

Subject: Environmental and Social Management Framework (ESMF) for the Program to Build Resilience for Food and Nutrition Security in the Horn of Africa

The Ministry of Environment and Forestry of the Government of the Republic of South Sudan has reviewed the Environmental and Social Management Framework (ESMF) for the Program to Build Resilience for Food and Nutrition Security in the Horn of Africa, and hereby grants a **No Objection** for the project to proceed and Environmental and Social Impact Assessments (ESIAs) will be conducted at project sites as required by the Environmental Policy of the Government and the African Development Bank (AfDB). The AfDB can proceed to disclose the ESMF.

Mr. Joseph Africano Bartel



Undersecretary,
Ministry of Environment and Forestry,
The Republic of South Sudan, Juba.

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Tel: +211 921 706 605




Bilpham Road, 500 meters from Seventh Day Adventist Round About, Juba

Annex II: Attendance list of participants during consultation


SOUTH SUDAN


The Program for Building Resilience for Food and Nutrition Security in the Horn of Africa (IDDRSI South Sudan)

Attendance List for participants 16/07/2021

S/N	Name	Position	Location	Phone Number	Signature
1	Hon. Egoe Emmanuel	County Commissioner	Kapoeta North	0923253333	
2	Saverio Dinsuele	SP Director KNC	KNC	0923901117	
3	Lotayo Iko Lotayo	S/Inspector G.H	KNC	0923548916	
4					
5					


SOUTH SUDAN


The Program for Building Resilience for Food and Nutrition Security in the Horn of Africa (IDDRSI South Sudan)

Attendance List for participants 15/07/2021

S/N	Name	Position	Location	Phone Number	Signature
1	Hon Abdullah Angelo Lokom	Commissioner	Kapoeta East	0927735556	
2	John Mark Logo	Office Manager	Kapoeta East	+24921548377	
3	Richard Chama	water specialist	Kapoeta East	092002210	
4	Lasada Joseph	Gender specialist	Kapoeta East	0922515710	
5	Zakaria Oyaha	SI Inspector Gender	Kec/Narus	0920838423	
6	Ehia Tebralem Losike	agriculture	Kapoeta East	-	
7	Joseph Severino	Administrator	Kapoeta East	0920819208	
8	Locheria Icarus	Executive Director AFSSC	Kapoeta East	0924772425	
9					
10					



SOUTH SUDAN



The Program for Building Resilience for Food and Nutrition Security in the Horn of Africa (IDDRSI South Sudan)
Attendance List for participants

14/07/2021

S/N	Name	Position	Location	Phone Number	Signature
1	Jama Jacob	EX-CD	K-S-C	0920325412	[Signature]
2	LOTORIT CHARLES	Ag CED	"	0920325412	[Signature]
3	Hon. Angelo Lominit	Hon. Commissioner	K-S-C	0921449898	[Signature]
4	Joseph Carlwick Lorika	Commissioner's Secretary	K-S-C	0923787318	[Signature]
5	Valentine White	Field Ext. Assistant	Kapoeta	0922002043	[Signature]
6	Kojore Jackson	WASH Inspector	K-S-C	0923543852	[Signature]
7	Angelo Longelejan	Paramount Chief	K-S-C	0920511716	[Signature]
8	Lino Lomony	WASH Director	K-S-C	0928407208	[Signature]
9	ANITHAT OLOTA	AGRIC- DEPT	K-S-C	0924950755	[Signature]
10					
11					

S/N	Name	Title	Institution/department
1	Bede Diring	Director General	SMOAFE
2	Martin Ahe	Director	SMOAFE
3	Chan Kuac	DI Agriculture	SMOAFE -
4	John Leun	DI Environment	SMOAFE
5			
6			
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8			
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DRSLP (II) CONSULTANCY TEAM INTRODUCTORY MEETING WITH NATIONAL IDDRSI PCU MEMBERS

FRIDAY, 12TH FEBRUARY, 2021

LIST OF PARTICIPANTS

S/NO.	FULL NAME	POSITION	AGENCY	CELL PHONE	E-MAIL	SIGNATURE
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S/NO.	FULL NAME	POSITION	AGENCY	CELL PHONE	E-MAIL	SIGNATURE
9	Joseph Kulung	D/director	MOEF	0921033326	kulungakele@gmail.com	
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13	Noel Lamunde	Inspector	MLF	0911622511	noelolamunde@gmail.com	
14	William Athil	NIC	IGAD	0922412563	WILLIAM.ATHIL@IGAD-INT	

Annexes: Pictures of participants during consultation meetings



