



KFW

ACTED



FINAL REPORT

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

**PROJECT: RECONSTRUCTION & STRENGTHENING OF PRODUCTIVE INFRASTRUCTURE
& VALUE CHAINS ACROSS A DISPLACEMENT-AFFECTED REGION IN SOUTH SUDAN**

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Prepared By:



EMC Consultants

ENVIRONMENTAL KNOWLEDGE IN PRACTISE

Shelter Afrique Center, 3rd Floor Wing A
Longonot Road, Uppehill
P.O.BOX 9648-00100 Nairobi Kenya
Tel: +254 20 4406162 | +254 722 579272
Email: info@emconsultants.org
Website: www.emconsultants.org

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ACRONYMS

CBD	Convention on Biodiversity
CDM	Clean Development Mechanism
CHMPS	Community Health Management Plans
CMS	Convention on migratory species
CO	Carbon monoxide
CO ₂	Carbon dioxide
CoC	Code of conduct
DRC	Democratic Republic of the Congo
EIA	Environmental Impact Assessment
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESS	Environmental and Social Standards
FI	Financial Intermediaries
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GIIP	Good International Industry Practice
GoRSS	Government of Republic of South Sudan's
GRM	Grievance Redress Mechanism
HDV	Heavy-Duty Vehicles
IEE	Initial Environmental Examinations
ITCZ	Intertropical Convergence Zone
IVM	Integrated vector management
LDVs	Light Duty Vehicles
MAFTACF	Ministry of Agriculture, Forestry, Tourism, Animal Resources, Cooperative & Fisheries
MEDIWR	Ministry of Electricity, Dams, Irrigation and Water Resources
MHDM	Ministry of Humanitarian and Disaster Management
MIWC	Ministry of Interior and Wildlife Conservation
MoE	Ministry of Environment
MPMI	Ministry of Petroleum, Mining, and Industry
NBSAP	National Biodiversity Strategy and Action Plan
NGO	Non-Governmental organizations
NOX	Nitrogen oxides
OHS	Occupational, Health and Safety
PA	Protected Areas
PfRR	Partnership for Recovery and Resilience
QIP	Quick Impact Projects
RCA	Root Cause Analysis
RPF	Resettlement Policy Framework
SEP	Stakeholder Engagement Plan
SIA	Social Impact Assessment
SME	Small and medium enterprises
SO ₂	Sulphur dioxide
SSRRC	South Sudan Relief and Rehabilitation Commission
WHO	World Health Organization

EXECUTIVE SUMMARY

This Environmental and Social Management Framework (ESMF) has been prepared for ACTED's Reconstruction and strengthening of productive infrastructure and value chains across a displacement-affected region in South Sudan which is a KfW financed project.

Background and Context

South Sudan is arguably one of the largest humanitarian crises in the world, a result of a staggering conflict that has left a crippled economy unable to sustain the basic needs of more than half of the country's population. However, despite the undeniable fragility of the South Sudanese context, the crisis hides a complex reality in which humanitarian disasters coexist with pockets of stability characterised by high productive potential and a drive to improve and bridge service delivery gaps. More importantly in light of the R-ARCSS (Revitalized Agreement on the Resolution of the Conflict in the Republic of South Sudan), these pockets of stability hold the potential to drive a new agenda for South Sudan through boosting productive capacity and offering pragmatic and locally anchored solutions to stabilisation and reintegration of displaced populations into socio-economic systems.

The Yambio-Juba Road, on which this project focuses, is a prime example of an axis which holds the potential to support multiple "hubs of resilience" or stable, sustainable areas of prosperity. On one hand, the former Equatorial states are the "breadbasket" of South Sudan, containing some of the main areas of production and supply in the country, particularly for staple cereals such as maize and sorghum. Two seasons for cereal crops and fertile soil boost production levels. In 2018, former Western Equatoria state cultivated the highest number of hectares per household (2.65 ha) of any other location, far ahead of the second, former Lakes state with 1.66 ha cultivated per household. There are encouragingly established local state infrastructures, many with local development plans, for example the "Maridi Vision: 2025", developed by the Maridi State government to provide a roadmap to recovery and development, and the "Partnership for Recovery and Resilience" (PfRR), led by USAID/UNDP and being pushed by the Gbudue State (former Yambio county) government.

On the other hand, an increase in conflict since July 2016 has resulted in large-scale displacements, disrupted farming activities, and reduced production in former Western Equatoria by 11 per cent. This is principally due to a reduced number of farming households and a smaller average area planted per household. However, the displacement context within former Western Equatoria is complex, with fluid movement trends characterized by transient populations resulting in high levels of IDPs and returnees settling across the state, including Maridi, Ibba and Yambio. Conflict has also reduced access between rural areas of production and urban markets; this is particularly acute from the Ibba and Maridi productive areas, to markets in Yambio, to Juba and to other onward locations such as Rumbek and Wau. The effects of the conflict are compounded by nationwide challenges such as lack of diversification of the formal economy and a shortfall in government revenue, which results in limited investment in infrastructure and market systems.

In former Western Equatoria there is only rudimentary processing of crops, which is limited to sun drying, and mostly on the ground, and similarly only local storage solutions (local granaries) are utilised. These basic post-harvest handling practices lead to high levels of wastage and losses, due to spoilage and pests and diseases. The only improved processing facilities are located in Maridi and Yambio towns, which are not easily accessible to rural farming communities due to poor roads and lack of transport options (increasing time and distance to reach), and additionally there are only 1-2 grinding mills that function in these urban centres.

In Maridi and Ibba, there are no large-scale storage facilities for agricultural produce, in both the urban centre and rural communities. In Yambio Town however, there does exist a large-scale agro-warehouse along with a WFP aggregation centre, and some smaller scale mobile aggregation facilities in some rural communities, run by humanitarian partners in partnership with WFP. In terms of power, Maridi Town has a functional power grid operated by a generator, however it is rarely utilised due to the high fuel costs, and therefore public access to power remains low. On the other hand, some shop-owners and traders in Maridi have solar power installed. In Yambio, there is non-functioning power grid, however a power facility was previously constructed in Yambio Town, which it is not currently operated or maintained by any organisation (former company left during insecurity).

There are also a number of fruits and vegetables that grow locally in abundance, such as mangoes, pineapples and lemons, which currently hold significant untapped potential as the local community has no means of exporting, storing or processing during their seasons to either consume later or sell, and most fruits are left unused and completely wasted. Fruit processing facilities will allow the community to take advantage of and profit from an otherwise completely wasted natural resource, which otherwise hold almost no value due to their widespread availability to the population. Beekeeping is another key livelihood source and honey is widely produced, with 38% of respondents reporting it as their main livelihood in the dry season in Maridi, followed by casual work (up to 28% in Yambio in the dry season) and small business.

Main Challenges and Problems

Based on the context and background above, ACTED has identified the following interlinked problems and work verticals as key areas of focus to drive development, stabilization and reconciliation along the Yambio-Juba Road.

1. Lack of large-scale infrastructure and sustainable energy production systems to support local economic development and enhance production

Despite production being higher in former Western Equatoria than the rest of South Sudan, due to extremely low levels of infrastructure there are significant gaps and needs in agricultural production value chains, which remain extremely poor and inefficient across these areas. Lack of adequate storage and processing options for maize, sorghum, cassava, and groundnuts are resulting in high levels of spoilage and losses, and discouraging farmers from undertaking surplus and commercial production, as produce cannot be kept unspoiled for long enough periods of time following harvests to either be sold or consumed. There is

also currently almost no access to power in rural communities, and very little in Maridi and Yambio towns themselves, which is a key requirement for sustainable storage and processing of agricultural produce. As outlined above, the high cost and limited access to fuel is a key barrier to access to power, therefore there is high potential impact and opportunity for renewable and non-intensive power solutions, such as solar power.

2. Poor access to markets, market linkages and trade/transport networks

A second key problem linked to the first, is that markets across Yambio and Maridi are hindered and negatively affected by extremely poor roads and insecurity, which result in severely limited connections and access between rural producing communities and urban centres/markets (often being completely cut-off, especially in the rainy season) which limits access and supplies to urban markets, as well as causing astronomical transportation costs. Consequently, the urban markets in Yambio and Maridi are dominated by foreign traders that have access to capital, foreign markets, and transport means, enabling them to import goods and produce on trucks. Local businesses also import most of their produce, however they often have to pool their resources in order to be able to afford to do so, and much less regularly.

Project Objectives

Support urban centres and their rural producing peripheries along the Yambio-Juba axis to meet their productive potential and increase food supply in a displacement-affected region of South Sudan.

Project Activities

Construction of Infrastructure to Support Improved Productive Capacity and Production

ACTED will construct productive infrastructure to strengthen agricultural value chains across the targeted areas focusing on traditional cereal crops (e.g., maize and sorghum) and bespoke high potential products (e.g., mangoes, pineapples, and lemons). ACTED will construct:

1. 2 large-scale agro-warehousing facilities (1,500 MT capacity) in the urban centres of Maridi and Ibba, which will both include storage and processing facilities for cereal crop produce
2. 6 small/medium scale agro-warehousing facilities (600 MT capacity) in the most productive peripheries around Maridi, which will also include storage and processing capabilities
3. 2 fruit processing facilities in Maridi and Yambio equipped with juicing, drying, packaging, and storing facilities
4. 1 honey processing facility in Ibba County that will enable the local processing, packaging, and storage of honey to strengthen the local value chain.

Construction of Community-Based Business and Social Development Infrastructure

ACTED proposes to construct approximately 30km of murrum roads (local gravel, CBR>40) to connect rural productive communities (with high levels of IDPs and returnees) to the urban centre of Maridi. The murrum road construction will also include constructing all the required structures, such as bridges and culverts, to ensure access to otherwise hard-

to-reach communities. The locations of the roads will be selected through the participation of the targeted communities and local authorities, ensuring that the roads connect key productive areas with high levels of IDPs/returnees, and where they will have the most impact. The final precise locations of the roads will be determined in collaboration with technical personnel (from ACTED and the contractor) to ensure proper consideration of technical aspects and requirements. ACTED will look for synergies with areas targeted through its GIZ-funded project, prioritising areas with least access yet high production.

The location of the roads will be decided in close coordination and collaboration with the community, to ensure that they will provide the highest maximum benefit. The roads will be handed over to local authorities and maintenance of the roads will be performed by the local authorities, in collaboration with local trained and equipped CBOs.

Construction and Reinforcement of Business Structures

To support market development, ACTED will develop 2 existing, or construct 2 new, business/multipurpose centres in Maridi and Yambio towns, which will provide a communal space for hosting a range of business services for SMEs and entrepreneurs. To create this conducive environment for innovation and entrepreneurship, ACTED will:

1. Power the centre and fit it with computers, to facilitate improved access to technology and communication services, such as the internet, which can open up a range of skills and online learning opportunities
2. Find local experts, and develop the talents and expertise of local experts, to provide training and mentorship to interested SMEs or entrepreneurs in key areas, such as business management, finance, computer training, CV writing, language training, and legal and administrative guidance
3. Support local employers and Chamber of Commerce to use the space for advertising employment and business opportunities, and raising awareness of rights and responsibilities in relation to employment
4. Create a free space where businesses, traders and producers can network, and come together to discuss business opportunities.

Construction of Communal Infrastructure

ACTED will establish and/or rehabilitate water points and sanitation facilities around Maridi and Ibba in order to increase access to and improve quality of water for household consumption as well as sanitation facilities in rural productive communities (especially for IDPs and returnees). In particular ACTED will construct/rehabilitate boreholes and semi-tube wells, and install water storage solutions (e.g., tanks) in key productive areas across Maridi and Ibba, which will provide improved access to water for household usage. The rehabilitated WASH infrastructure will be handed over to CBOs in the relevant communities. ACTED will train members of the CBOs in the operation and maintenance of the infrastructure and provide tools and explore with the CBOs potential mechanisms for securing and applying funds for any future spare parts that may be required (although primary maintenance responsibility lies with local authorities).

Project Beneficiaries

ACTED's proposed intervention will target communities and rural productive areas around Maridi, Ibba and Yambio, as well as in the urban centres, that have a high number of IDPs and Returnees to establish and improve economic opportunities for IDPs, returnees and host communities. ACTED's project will implement an Area Based Programming approach focussing on early recovery and building conducive environments for IDPs and Returnees. Specifically, ACTED will target farmers and farmer groups/cooperatives that are already producing the key cereal crops of maize and sorghum, as well as beekeepers/beekeeping groups that are producing honey, and farmers/cooperatives that are producing/have access to fruits.

ACTED will prioritise and target existing farmer field schools that are already being engaged through ACTED's GIZ funded project as these farmers have been identified as the most productive in their areas and are also part of the IDP and returnee areas and communities. ACTED will also target existing local small/medium enterprises that are operating in Maridi and Yambio towns, in order to support existing businesses to expand, and increase employment opportunities for IDPs and returnees (including youth). The local institutions targeted in Maridi, Ibba and Yambio include the Ministry of Agriculture (and all sub directorates), Chamber of Commerce, Governor's offices and Department of Social Development.

ESMF Justification and Objectives

ESMF was selected as the environmental and social instrument for assessing, managing, and monitoring environmental and social risks and impacts of the Project. The environmental and social risks and impacts are expected to be medium in magnitude, temporary, site specific, predictable, and reversible. Since the exact number, location, and designs of investments envisaged under the project are yet to be determined, the project will manage the environmental and social impacts and risks by following a framework approach.

The ESMF is an umbrella instrument, applicable to all project activities, that sets out the principles, rules, guidelines, and procedures for screening proposed project activities based on their expected environmental and social impacts and defines the adequate environmental and social instruments to be applied in each case. Such instruments can range from an Environmental and Social Impact Assessment (ESIA) to a simplified Environmental and Social Management Plan (ESMP). The ESMF also establishes the principles and procedures to undertake consultations and to implement grievance mechanisms, as required; a monitoring and evaluation system; and a reporting system. It will establish the institutional responsibilities for implementation, supervision, monitoring and evaluation and reporting on environmental and social risk management throughout all phases of the project (design, construction, and operation).

Overall, the ESMF is a tool that facilitates the assessment of impacts, the identification of measures and plans to reduce, mitigate and/or offset adverse impacts and enhance positive impacts, as well as the provisions for estimating and budgeting the costs of such measures.

It will detail the approach and process for screening, assessing, addressing, and managing safeguard issues for already identified and potential project activities.

This ESMF lays out screening processes and tools directly implemented by the ACTED to assess risks and impacts per activity. This will facilitate the recommendation of appropriate mitigation and monitoring measures for each activity. The main purpose of this ESMF is therefore the establishment of procedures and methodologies for environmental and social assessments, review, approval, and implementation of activities to be financed under the project, as the nature, scope and locations of activities become known during the implementation of the project.

The ESMF describes the appropriate roles and responsibilities of ACTED and other stakeholders and outlines the reporting procedures on environmental and social risk issues. It describes the managing and monitoring processes of environmental and social risks and impacts related to the activities to be implemented. It further determines the training, capacity building and technical assistance required for ACTED to successfully implement the provisions of the ESMF; and provides practical information resources for implementing the ESMF. It also lays out the project's staffing and institutional arrangements clarifying the relations between ACTED and KfW, including their roles and responsibilities in view of the implementation of the ESMF.

Policy, Legal and Institutional Issues

The following legal instruments among others were reviewed in view of the fact that they provide guidance and regulations when implementing the sub projects to be constructed by ACTED. These are principally the Government of South Sudan's legislations that apply to this project and a comparative analysis has been made between some certain relevant regulations of the GoSS and the applicable Bank's Environmental and Social Standards (ESS).

Laws and Regulations

- Transitional Constitutional of 2011
- The Environment Protection Bill, 2010
- Forestry Commission Act, 2003
- Traffic Act
- The Water Act
- Wildlife Conservation and National Parks Protection Act, 2003
- Public Health Act 1975
- Land Act, 2009
- Labour Act
- Child Act

Policies

- South Sudan Vision 2040
- National Environment Policy 2015-2025
- The Water Policy
- National WASH Sector Strategic Framework

- Forestry Policy 2019
- The National Biodiversity Strategy and Action Plan (NBSAP)
- National Environmental & Social Screening Assessment Framework

International Conventions

- Convention on Biological Diversity (1992)
- International Plant Protection Convention of FAO (1952)
- United Nations Framework Convention on Climate Change (1992)

Environmental and Social Requirements

In order to reduce, minimise and mitigate adverse risks and impacts and undue harm of its development projects to the environment, all Bank-financed projects are guided by applicable environmental and social standards under the Environmental and Social Framework (ESF). A number of Bank’s ESSs are applicable as a result of this project E&S screening, and they include: -

Table 0-1. Relevant Environmental and Social Standards

ESS	Rationale
Assessment and Management of Environmental and Social Risks and Impacts. (ESS1)	<p>During implementation of the micro-projects and multi-community investments, these activities are likely to result to potential negative environmental risks and impacts that include soil and water pollution, dust emissions, community health and safety risks and Occupational, Health and Safety (OHS) risks, generation of hazardous and non-hazardous waste.</p> <p>These impacts are expected to be temporary, site specific, reversible, and easy to mitigate. The potential negative environmental risks and impacts associated with minor construction activities include: (i) Air pollution, (ii) Soil and water pollution; (iii) Community health and safety; (iv) OHS; and (v) Generation of hazardous and non-hazardous waste. These impacts are expected to be temporary, site specific, predictable, reversible, and easy to mitigate. Other impacts include the solid waste generation from the spoilt farm produce.</p> <p>The negative social impacts that could arise from the construction activities are: (i) Conflict among communities due to site selection of location of investments; (ii) Inadequate consultations with the local populations due to the vastness of the areas being targeted by the project; (iii) Community health and safety; (vi) Gender Based Violence ;(vii) Labour conflicts; and (viii) Child labor.</p> <p>The ESMF will set out the principles, rules, guidelines and procedures for assessing the environmental and social risks and impacts associated with the project.</p> <p>It will also specify measures and plans to reduce, mitigate and/or offset adverse risks and impacts, outline provisions for estimating and budgeting the costs of such measures, and provide information on the agencies responsible for addressing project risks and impacts,</p>

	<p>including on their capacity to manage environmental and social risks and impacts. Further, the ESMF specifies information on areas where the individual subprojects/investments are to be sited, including any potential environmental and social vulnerabilities of the areas, and the potential impacts that may occur and mitigation measures that might be expected to be used. These environmental and social risk management tools will be prepared and disclosed. During project implementation sub-project site specific Environmental and Social Impact Assessments (ESIA) and RAPs as required in the event of any economic displacement or land acquisition will be prepared by ACTED.</p>
Labor and Working Conditions (ESS2)	<p>The project will involve the use of workers in the construction of works. The ESMF will address 1) Process to document voluntary participation; 2) Working conditions particularly OSHA. During Implementation of project activities, the respective contractors will prepare Occupational Health and Safety (OHS) plans and the Community Health Management Plans (CHMPS) as part of their contractor specific ESMPs to manage related risks.</p> <p>Moreover, all consultants and contracted workers will sign a code of conduct (CoC) in relevant languages, acceptable to ACTED, to mitigate the risk of GBV/SEA or misconduct in the workplace and in contact with community members.</p> <p>They will also ensure that national labor-related laws are upheld, such as public service act, labor law, public health provisions, and public service human resource policy, etc. and institutional roles related to enforcement of the laws, and recruitment, discipline, appraisals, and dismissals. A redress mechanism for work related grievances will be provided to project staff and consultants, with necessary considerations for confidentiality and whistle-blower protection.</p>
Resource Efficiency and Pollution Prevention and Management (ESS3)	<p>During implementation, the results of environmental and social risk screening of proposed sub-projects activities will advise on whether there are anticipated risks related to water (e.g., potential for high water demand), raw materials and energy use; and how risks of air pollution and waste generation will be handled.</p>
Community Health and Safety (ESS4)	<p>There are additional risks of GBV/SEA that may extend to communities being served by the project. The project monitoring activities will also focus on the community health and safety issues and address any emerging challenges during the implementation.</p>
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement (ESS5)	<p>A Resettlement Policy Framework (RPF) has been prepared and provides guidance on 1) Screening process; 2) If land is to be donated or voluntary sold, the process and transaction fulfil the requirements of ESS5 and are well documented. The RPF also provides guidelines to address livelihood interruption impacts and preparation RAPs as required in the event of any economic displacement or land acquisition.</p>
Biodiversity Conservation and	<p>Relevance of this ESS will be further assessed during project preparation and as part of the ESIA process. However, it is expected</p>

Sustainable Management of Living Natural Resources (ESS 6)	that the project will not support sub-projects that are located in sensitive ecological areas and or protected areas. This ESMF has an environmental and social screening tool that will be used for screening the proposed subprojects and will ensure that no sub-project is sited in an ecologically fragile and or protected area. Since no subproject will be located in areas of ecologically sensitive or protected areas, risks related to sustainable management of living natural resources and primary supply of natural resource commodities are not anticipated.
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities (ESS7)	<u>Not Applicable</u>
Cultural Heritage (ESS8)	Construction works have been proposed under the project. Thus, there is the potential for chance find of cultural or archaeological significance during construction. The ESMF covers the risks associated with intangible cultural heritage (such as disruption to religious/cultural festivity in the community by civil work). It provides that adequate measures will be carried out including meaningful consultations with the relevant stakeholders and documentation and protection of the identified intangible cultural heritage. Subproject specific ESMPs will address these issues through the inclusion of chance find procedures and site-specific mitigation measures.
Stakeholder Engagement and Information Disclosure (ESS 10)	A key risk under this standard, relates to potential inadequate, ineffective, insufficiently inclusive, and inappropriate stakeholder and community engagements and disclosure of information leading to exclusion of truly vulnerable, marginalized and minority members of the community from expressing their views and concerns relating to the project and to their exclusion from sharing in project benefits, amplified by the context of limited resources against widespread need. Others include elite capture where project benefits are diverted to less-needy individuals and locations and poor access to beneficiaries for meaningful community engagements and difficulty in monitoring for social harm.

Environmental Risks Classification

Substantial

The potential negative environmental risks and impacts associated with construction activities include: (i) Air pollution, (ii) Soil and water pollution; (iii) Community health and safety; (iv) Occupational, health and safety; (v) Generation of hazardous and non-hazardous wastes (vi) Noise pollution

Social Risk Classification

Substantial

The negative social impacts that could arise from the activities are: (i) Conflict among communities due to site selection and investments; (ii) Inadequate consultations with the local populations being targeted by the project; and (iii) Community health and safety.

There is also risk of increased cases of gender-based violence (GBV) and child labour due to the project. Labour influx associated with these activities is a primary risk, as it may impact upon the community through sexual exploitation and abuse of vulnerable women and girls or spreading of communicable diseases (including HIV/STDs and COVID-19) to otherwise isolated rural communities with limited access to health services.

The overall Environmental and Social Risk Classification is rated as **Substantial**.

Adverse Risks, Impacts and Mitigation Measures

Below is a summary of the potential negative environmental and social risks and impacts of the projects and proposed mitigation measures.

Table 0-2. Summary of Mitigation Measures

Impacts	Description of mitigation measures
Physical Environment	
Waste disposal	<p><u>Solid nontoxic waste</u> Adequate waste receptacles and facilities should be provided at project sites/camp sites Training and awareness on safe waste disposal in construction camps for all workers Final disposal should be at approved dumpsites</p> <p><u>Waste oil /fuel</u> Spent or waste oil from vehicles and equipment should be collected and temporarily stored in drums or containers at site Waste oil should be disposed of by oil marketing companies or agents approved or recognized and have the capacity to undertake oil disposal</p>
Air pollution	<p>Proposed investments should require that construction contractors operate only well-maintained engines, vehicles, trucks, and equipment. A routine maintenance program for all equipment, vehicles, trucks, and power generating engines should be in place. The project should ensure the use of good quality fuel and lubricants only If dust generation at the project/construction site becomes a problem, limited wetting of sites and or unloading and reloading points should be done to reduce dust raising Construction traffic speed control measures should be enforced on unpaved roads (speed limits through communities should be ≤ 50km/hr on unpaved roads and near or at project site should be ≤ 30 km/hr). Engines of vehicles/trucks and earth-moving equipment should be switched off when not in use.</p>
Noise and vibration	<p>Proposed investments should require contractors to use equipment and vehicles that are in good working order, well maintained, and that have some noise suppression equipment (e.g., mufflers, noise baffles) intact and in working order. This will be achieved by making it a component of contractual agreements with the construction contractors. Contractors will be required to implement best driving practices when approaching and leaving the site (speed limit of ≤ 30 km/hr) to minimize noise generation created through activities such as unnecessary acceleration and breaking squeal.</p>

	Engines of vehicles/trucks and earth-moving equipment should be switched off when not in use.
Impacts on landscape and visual Receptors	Landscaping of facilities after construction and restoration of disturbed areas e.g., borrow pits
Impact on traffic and public safety	Only road worthy vehicles and trucks should be used to avoid frequent breakdowns on the roads Only experienced drivers should be employed Contractors must provide training for drivers; Establish speed limits; Enforce safe driving and take disciplinary action against repeat offenders
Water pollution	No garbage/refuse, oily wastes, fuels/waste oils should be discharged into drains or onto site grounds Fuel storage tanks/sites should be properly secured to contain any spillage Maintenance and cleaning of vehicles, trucks and equipment should take place offsite especially where project sites are close to water bodies. Toilet facilities should be provided for construction workers to avoid indiscriminate defecation in nearby bush or local water bodies
Soil and land degradation	Minimize land clearing areas as much as possible to avoid unnecessary exposure of bare ground to the elements of the weather Re-vegetate cleared areas as early as possible using native plant species As much as possible, avoid construction work in the rainy season
Impact on fauna and habitat	Avoid unnecessary exposure and access to sensitive habitat areas For identified or suspected sensitive habitats (swamps/ wetlands), regular inspection or monitoring should be carried out in the area prior to start and during work.
Impacts on human health/ traffic safety	Trucks carrying construction materials such as sand, quarry dust, laterite etc. will have the buckets covered with tarpaulin or appropriate polythene material from or to project site Only road worthy vehicles/trucks should be used Only experienced drivers/operators should be employed Except for areas secured by fencing, all active construction areas will be marked with high-visibility tape to reduce the risk of accidents involving pedestrians and vehicles. All open trenches and excavated areas will be backfilled as soon as possible after construction has been completed. Access to open trenches and excavated areas will be secured to prevent pedestrians or vehicles from falling in. Adequate sanitary facilities will be available for workers and open range defecation will not be countenanced. Construction workers will be provided with and educated to wear suitable Personal Protective Equipment (PPE) including hard hats, overalls, high-visibility vests, safety boots, earplugs, gloves etc. Enforce use of PPEs at all times for all staff and labourers and ensure supervision of the same to minimise accidents Construction workers should be educated to adhere to basic rules with regard to protection of public health, including most importantly hygiene and disease (HIV/AIDS) prevention.
Impacts on cultural heritage / archaeological interest/	The pre-construction surveys should identify cultural heritage resources that the project should avoid and by-pass these resources. The project should implement a chance find procedure and reporting system to be used by contractors in the event that a cultural heritage feature is encountered.

Impacts on human health and public safety	The project will require all contractors to implement an Environmental, Health and Safety (EHS) plan which will outline procedures for avoiding health and safety incidents and for emergency medical treatment. This will be achieved by making it a component of contractual agreement. Contractors' workers will be required to wear suitable PPE including hard hats, high-visibility vests, safety boots and gloves and life vests as appropriate in accordance with the EHS plan Enforce use of PPEs at all times for all staff and labourers and ensure supervision of the same to minimise accidents All construction and other workers will be sufficiently trained in the safe methods pertaining to their area of work to avoid injuries.
Labor related issues	The project to prepare redundancy plans and packages to be discussed with affected workers which will include re- training and re- tooling of affected workers and aim to avoid labor strife. Workers should have written and signed contracts for their jobs and worker's grievance redress system should be availed
Gender Based Violence	Development of Gender Based Action Plan Development of Code of Conduct Sensitization/ training of workers and community groups and members on GBV issues
HIV/AIDS spread and STI's	Design HIV/AIDS awareness, sensitization and prevention program for each project that extends to the communities as a whole;
Labour and employment related impacts	Ensure that the local communities are given priority in relation to employment and provided with training (skilled) to provide future labour in the project e.g., operation and maintenance

Procedure for Preparation of Sub-Project E&S Instruments

Using this ESMF which is in essence a guide, there would be need to develop site specific Environmental and Social Impact Assessment (ESIAs) for each sub project once the designs, scope and location among others are known in order to ensure compliance with the Environment Protection Bill 2010, KfW Sustainability Standards and World Bank's applicable Environmental and Social Standards (ESS).

ACTED will screen all subprojects to determine the environmental and social issues that the subproject might trigger, and the type and level of assessment required (**Annex A, Screening Form**). The ESIA would have to be prepared by an EIA/EA expert, reviewed by ACTED and submitted to KfW for further review and clearance prior to commencement of construction.

Capacity Building

Capacity development and strengthening remains a crucial component in this ESMF and will be integrated all through the project implementation phase. The Project will be implemented by ACTED. In order to strengthen the capacity of ACTED and other implementing agencies, the following capacity building efforts are recommended.

Table 0-3. Capacity Building

Training Topic	Target
World Bank ESF, ESS	ACTED and County Staff

Monitoring and Reporting

ACTED will be required to prepare and submit to KfW regular monitoring progress reports on the environmental, social, health and safety (ESHS) performance of the Project, including but not limited to, status of preparation and implementation of E&S documents, stakeholder engagement activities, and the functioning of the grievance mechanism. Reporting will be quarterly and annually throughout the project implementation period. ACTED will promptly notify KfW (within 48 hours) of any incident or accident related to the Project which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers including child abuse, gender-based violence, or any dispute between local communities and project workers.

Public Consultations and Disclosure

This ESMF will be disclosed on ACTED's website of and KfW's external website upon its review and approval by KfW.

Grievance Redress and Management

ACTED will maintain a documented record of stakeholder engagement and GRM, including a description of the stakeholders consulted, a summary of the feedback/grievances received and a brief explanation of how and when the feedback was considered, or the reasons why the issue could not be resolved. For complaints related to GBV, reporting and response protocol including identification of SEA/H and GBV-sensitive channels to be integrated into the grievance mechanism, and requirements for enabling survivor-centered care. Robust community engagements will be conducted before commencement of project activities, as well as sensitization on the availability of a project GRM to support the systematic uptake, processing and resolution of project-related complaints and grievances.

I INTRODUCTION

I.1 Background and Context

South Sudan is arguably one of the largest humanitarian crises in the world, a result of a staggering conflict that has left a crippled economy unable to sustain the basic needs of more than half of the country's population. However, despite the undeniable fragility of the South Sudanese context, the crisis hides a complex reality in which humanitarian disasters coexist with pockets of stability characterised by high productive potential and a drive to improve and bridge service delivery gaps. More importantly in light of the R-ARCSS (Revitalized Agreement on the Resolution of the Conflict in the Republic of South Sudan), these pockets of stability hold the potential to drive a new agenda for South Sudan through boosting productive capacity and offering pragmatic and locally anchored solutions to stabilisation and reintegration of displaced populations into socio-economic systems.

The Yambio-Juba Road, on which this project focuses, is a prime example of an axis which holds the potential to support multiple “hubs of resilience” or stable, sustainable areas of prosperity. On one hand, the former Equatorial states are the “breadbasket” of South Sudan, containing some of the main areas of production and supply in the country, particularly for staple cereals such as maize and sorghum. Two seasons for cereal crops and fertile soil boost production levels. In 2018, former Western Equatoria state cultivated the highest number of hectares per household (2.65 ha) of any other location, far ahead of the second, former Lakes state with 1.66 ha cultivated per household. There are encouragingly established local state infrastructures, many with local development plans, for example the “Maridi Vision: 2025”, developed by the Maridi State government to provide a roadmap to recovery and development, and the “Partnership for Recovery and Resilience” (PfRR), led by USAID/UNDP and being pushed by the Gbudue State (former Yambio county) government.

On the other hand, an increase in conflict since July 2016 has resulted in large-scale displacements, disrupted farming activities, and reduced production in former Western Equatoria by 11 per cent. This is principally due to a reduced number of farming households and a smaller average area planted per household. However, the displacement context within former Western Equatoria is complex, with fluid movement trends characterised by transient populations resulting in high levels of IDPs and returnees settling across the state, including Maridi, Ibba and Yambio. Conflict has also reduced access between rural areas of production and urban markets; this is particularly acute from the Ibba and Maridi productive areas, to markets in Yambio, to Juba and to other onward locations such as Rumbek and Wau. The effects of the conflict are compounded by nationwide challenges such as lack of diversification of the formal economy and a shortfall in government revenue, which results in limited investment in infrastructure and market systems.

In former Western Equatoria there is only rudimentary processing of crops, which is limited to sun drying, and mostly on the ground, and similarly only local storage solutions (local granaries) are utilised. These basic post-harvest handling practices lead to high levels of wastage and losses, due to spoilage and pests and diseases. The only improved

processing facilities are located in Maridi and Yambio towns, which are not easily accessible to rural farming communities due to poor roads and lack of transport options (increasing time and distance to reach), and additionally there are only 1-2 grinding mills that function in these urban centres.

In Maridi and Ibba, there are no large-scale storage facilities for agricultural produce, in both the urban centre and rural communities. In Yambio Town however, there does exist a large-scale agro-warehouse along with a WFP aggregation centre, and some smaller scale mobile aggregation facilities in some rural communities, run by humanitarian partners in partnership with WFP. In terms of power, Maridi Town has a functional power grid operated by a generator, however it is rarely utilised due to the high fuel costs, and therefore public access to power remains low. On the other hand, some shop-owners and traders in Maridi have solar power installed. In Yambio, there is non-functioning power grid, however a power facility was previously constructed in Yambio Town, which it is not currently operated or maintained by any organisation (former company left during insecurity).

There are also a number of fruits and vegetables that grow locally in abundance, such as mangoes, pineapples and lemons, which currently hold significant untapped potential as the local community has no means of exporting, storing or processing during their seasons to either consume later or sell, and most fruits are left unused and completely wasted. Fruit processing facilities will allow the community to take advantage of and profit from an otherwise completely wasted natural resource, which otherwise hold almost no value due to their widespread availability to the population. Beekeeping is another key livelihood source and honey is widely produced, with 38% of respondents reporting it as their main livelihood in the dry season in Maridi, followed by casual work (up to 28% in Yambio in the dry season) and small business.

1.2 Main Challenges and Problems

Based on the context and background above, ACTED has identified the following interlinked problems and work verticals as key areas of focus to drive development, stabilization and reconciliation along the Yambio-Juba Road.

1. Lack of large-scale infrastructure and sustainable energy production systems to support local economic development and enhance production

Despite production being higher in former Western Equatoria than the rest of South Sudan, due to extremely low levels of infrastructure there are significant gaps and needs in agricultural production value chains, which remain extremely poor and inefficient across these areas. Lack of adequate storage and processing options for maize, sorghum, cassava, and groundnuts are resulting in high levels of spoilage and losses, and discouraging farmers from undertaking surplus and commercial production, as produce cannot be kept unspoiled for long enough periods of time following harvests to either be sold or consumed. There is also currently almost no access to power in rural communities, and very little in Maridi and Yambio towns themselves, which is a key requirement for sustainable storage and processing of agricultural produce. As outlined above, the high cost and limited access to

fuel is a key barrier to access to power, therefore there is high potential impact and opportunity for renewable and non-intensive power solutions, such as solar power.

2. Poor access to markets, market linkages and trade/transport networks

A second key problem linked to the first, is that markets across Yambio and Maridi are hindered and negatively affected by extremely poor roads and insecurity, which result in severely limited connections and access between rural producing communities and urban centres/markets (often being completely cut-off, especially in the rainy season) which limits access and supplies to urban markets, as well as causing astronomical transportation costs. Consequently, the urban markets in Yambio and Maridi are dominated by foreign traders that have access to capital, foreign markets, and transport means, enabling them to import goods and produce on trucks. Local businesses also import most of their produce, however they often have to pool their resources in order to be able to afford to do so, and much less regularly.

1.3 Project Objectives

Support urban centres and their rural producing peripheries along the Yambio-Juba axis to meet their productive potential and increase food supply in a displacement-affected region of South Sudan.

1.4 Project Description

1.4.1 Construction of Infrastructure to Support Improved Productive Capacity and Production

As part of ACTED's EMERGE approach, ACTED will construct productive infrastructure to strengthen agricultural value chains across the targeted areas focusing on traditional cereal crops (e.g., maize and sorghum) and bespoke high potential products (e.g., mangoes, pineapples, and lemons). ACTED will construct:

1. 2 large-scale agro-warehousing facilities (1,500 MT capacity) in the urban centres of Maridi and Ibba, which will both include storage and processing facilities for cereal crop produce
2. 6 small/medium scale agro-warehousing facilities (600 MT capacity) in the most productive peripheries around Maridi, which will also include storage and processing capabilities
3. 2 fruit processing facilities in Maridi and Yambio equipped with juicing, drying, packaging, and storing facilities
4. 1 honey processing facility in Ibba County that will enable the local processing, packaging, and storage of honey to strengthen the local value chain.

The 8 agro-warehousing facilities and 2 fruit processing facilities will be solar-powered, avoiding from the start the need to engage with non-renewable energy sources. ACTED will install the solar equipment and train selected cooperatives in the community, alongside local authorities, in operation and maintenance. Basic materials for repair are available in the markets of Yambio, and occasionally Maridi.

1. The agro-warehousing facilities will be handed over to existing farmer cooperatives, with members trained and able to use membership fees/income to maintain the sites.

2. The fruit processing facilities will be handed over to existing producer cooperatives with members trained and able to use income to maintain the sites.
3. The honey processing facility will be handed over to beekeeping cooperatives, with members trained and able to use membership fees/income to maintain the sites.

Impact

- Farmers will be able to properly store and process their agricultural cereal produce, which will significantly reduce spoilage and wastage and allow a larger quantity of produce to be kept for a longer period. Therefore, more agricultural produce will be available in the local community and markets, which will help reduce food insecurity. Secondly, the improved quantities and quality of cereal produce will make marketing and selling produce easier for farmers and increase profitability of agricultural production, thus incentivizing the farmers to increase their productivity. This will help transition the local community from smallholder and subsistence farming to commercial farming.
- The fruit processing facilities will allow the community to take advantage of and profit from an otherwise completely wasted natural resource, in unused fruit during key seasons. Mangoes, pineapples, and lemons are in huge abundance in Maridi and Yambio, and during the seasons the fruit hold almost no value due to their widespread availability to the population. However, due to their abundance and lack of any kind of processing and preservation facilities, most go unused and are completely wasted, as the community has no means of storing or processing them to either consume later or to sell.

Target Group

1. IDPs and returnees in productive communities around Maridi and Ibba
2. Existing farmer cooperatives including IDPs/returnees, Farmer Field School groups (GiZ)
3. Seed multiplication Groups (GiZ), Beekeepers.

Direct Beneficiaries

1. 1 large-scale agro-warehouse in Maridi Town: 24,420.
2. 1 large-scale agro-warehouse in Ibba Town: 17,190.
3. 4 medium-scale agro-warehouses around Maridi County: 14,700–farming household populations (including IDPs/returnees) in Maridi Central payam (overlap with large-scale agro-warehouse in Maridi Town)
4. 2 medium-scale agro-warehouses around Ibba Town: 8,598 – farming households’ populations (including IDPs/returnees) in Ibba Central payam (overlap with large-scale agro-warehouse in Ibba Town);
5. 1 fruit processing facility in Maridi Town: 3,000 (500 HHs)
6. 1 fruit processing facility in Yambio Town: 3,000 (500 HHs)
7. 1 honey processing facility in Madebe centre of Ibba county 3,000 (500 HHs)

I.4.2 Construction of Community-Based Business and Social Development Infrastructure

ACTED proposes to construct approximately 30km of murrum roads (local gravel, CBR>40) to connect rural productive communities (with high levels of IDPs and returnees) to the urban centre of Maridi. The murrum road construction will also include constructing all the required structures, such as bridges and culverts, to ensure access to otherwise hard-to-reach communities. The locations of the roads will be selected through the participation of the targeted communities and local authorities, ensuring that the roads connect key productive areas with high levels of IDPs/returnees, and where they will have the most impact. The final precise locations of the roads will be determined in collaboration with technical personnel (from ACTED and the contractor) to ensure proper consideration of technical aspects and requirements. ACTED will look for synergies with areas targeted through its GIZ-funded project, prioritising areas with least access yet high production. The location of the roads will be decided in close coordination and collaboration with the community, to ensure that they will provide the highest maximum benefit. The roads will be handed over to local authorities and maintenance of the roads will be performed by the local authorities, in collaboration with local trained and equipped CBOs.

Impact

Roads have been identified as the most important infrastructure for the development of Maridi county. Currently, most of the population and communities live in rural areas and lack access to markets and basic services, which are concentrated in the urban centre of Maridi Town. Roads will allow access for rural and productive communities to business, employment opportunities and markets, as well as increasing access for traders and retailers to productive areas to buy local produce. Producers will have much greater access to markets for their produce. In turn, this will encourage and facilitate increased production and economic participation. Additionally, improved roads will allow these rural IDP and returnee communities to have much better access to basic services, such as health, WASH, education, and employment. Due to the extremely poor nature of the roads, not only are rural farming employment in Maridi town, but ambulances also cannot reach most rural communities, and similarly local authorities and institutions cannot reach locations to provide services, such as repairing of water points. The impact of improved roads in Maridi county is anticipated to be the most significant under this project, and therefore a significant investment is required (hence this Output makes up the highest proportion of the budget). Murrum roads are the most feasible and affordable option that will provide an effective and durable asset, especially compared to the current feeder roads used throughout former Western Equatoria.

Target Group

1. IDPs/returnees in productive areas (pre-identified as Mboroko, Kuwanga, and Mudubai bomas)
2. Farmers and smallholder producers

Direct Beneficiaries

1. 30 km of murrum road constructed: 28,650

I.4.3 Construction and Reinforcement of Business Structures

To support market development, ACTED will develop 2 existing, or construct 2 new, business/multipurpose centres in Maridi and Yambio towns, which will provide a communal space for hosting a range of business services for SMEs and entrepreneurs. To create this conducive environment for innovation and entrepreneurship, ACTED will:

1. Power the centre and fit it with computers, to facilitate improved access to technology and communication services, such as the internet, which can open up a range of skills and online learning opportunities
2. Find local experts, and develop the talents and expertise of local experts, to provide training and mentorship to interested SMEs or entrepreneurs in key areas, such as business management, finance, computer training, CV writing, language training, and legal and administrative guidance
3. Support local employers and Chamber of Commerce to use the space for advertising employment and business opportunities, and raising awareness of rights and responsibilities in relation to employment
4. Create a free space where businesses, traders and producers can network, and come together to discuss business opportunities.

There currently exists a few small vocational training centres in Yambio (run by humanitarian partners), and therefore ACTED will look to engage with the community and humanitarian partners to collectively upgrade the facility and services already in existence as a priority, rather than immediately establishing new centres. As associated activities, ACTED will:

1. Provide in-depth business and entrepreneurship training to established micro/small and medium enterprises (SMEs) in Maridi and Yambio. The business and entrepreneurship training will cover a range of topics in depth, including financial literacy and numeracy, and will increase the capacity and knowledge of local businesses and entrepreneurs in running and expanding their businesses effectively.
2. Provide capacity building and skill development training in targeted trade skills such as mechanics, carpentry and blacksmithing along with inputs to support the work of selected trainees. These trade skills have been identified as gaps in the current market, and able to support the productive infrastructure proposed and the agricultural sector in general, as well as other livelihoods in Maridi and Yambio.
3. At the end of these structured training courses, ACTED will run an open call for the submission of innovative business plans. A diverse committee will review the plans and then issue tailored and controlled business investment grants to directly support the establishment, expansion and consolidation of relevant businesses.

The 2 business/multipurpose centres will be solar powered, avoiding from the start the need to engage with non-renewable energy sources. ACTED will install the solar equipment and based on an assessment of the current operational structure of existing centres, train selected individuals in the community, alongside local authorities, in operation, maintenance and repair. Basic materials for repair are available in the markets of Yambio. Depending on the existing structure, the centres will be handed over to either primary SMEs using the centre, or otherwise relevant local authorities.

Impact

Most businesses in Maridi and Yambio lack skills and access to support services and capital, and youth unemployment is extremely high. Therefore, the business centres will provide access to business services on an individual basis, and the in-depth training and investment grants supporting established businesses are aimed to promote growth and create employment opportunities and jobs for the local community. This project focuses heavily on agricultural production and value chains; however, it is important to also provide some support to local businesses to facilitate general market development. Trade skill training will strengthen existing livelihoods that are linked to agriculture.

Target Group

1. Established businesses (SMEs), entrepreneurs and youth (IDPs/returnees).

Direct Beneficiaries

1. 1 Business Centre in Yambio Town: 6,000 (1,000 HHs)
2. 1 Business Centre in Maridi Town: 6,000 (1,000 HHs)
3. Business training: 100 SMEs/entrepreneurs (500 indirect beneficiaries)
4. Business grants: 20 SMEs/entrepreneurs (100 indirect beneficiaries)

I.4.4 Construction of Market Infrastructure and Support to Marketing and Transportation of Commodities

In the initial phase of the project, ACTED will conduct a comprehensive value chain analysis of local products, including agricultural produce and honey/beekeeping and other bespoke products to identify gaps and potential niches.

First, ACTED will support existing farmer cooperatives in the key agricultural areas of cereal production and honey/beekeeping, through the provision of capacity building training in business management and planning, grants, machinery/equipment and transport means (such as local tricycles) to facilitate the transportation of produce to both storage/processing facilities as well as markets. This support is aimed at strengthening the local agricultural value chain and building the capacity and resources of producer cooperatives to support their members (farmers/beekeepers), such as transporting of goods from rural areas to markets through communal transport assets. In the short/medium term, ACTED is aiming to supply the main market in Maridi Town, as well as exporting to Yambio Town and Juba with local produce. In addition, as WFP provides a significant market for cereal produce in Yambio (to distribute in deficit areas of South Sudan), ACTED will promote the integration of cereal production in Maridi into WFP programmes through the existing Aggregation Centres in Yambio, by trying to establish linkages between the cooperatives and WFP. There are no prerequisites for selling cereal crops to WFP, however the produce needs to go through quality control testing.

Secondly, ACTED will increase their skills and knowledge in the processing of fruits (including quality control and testing) and marketing, through a consultant. Marketing, packaging, and branding strategies will form a key part of the capacity building training and support for the fruit processing cooperatives, as this will be important to the businesses ability to reach retailers and compete with similar products in larger markets such as Juba.

Third, ACTED will directly link the producers and cooperatives from the productive areas of Yambio, Ibba and Maridi with buyers, retailers, supermarkets, and businesses located across Maridi and Yambio, as well as in Juba, through direct marketing, expositions, fairs and exchange visits to generate interest and promote trade, to improve agricultural value chains. ACTED will also link producer cooperatives with transport operators and networks to facilitate the movement of commodities to Juba. While Maridi, Yambio and Juba operate as free market economies, ACTED will support the cooperatives in marketing and establishing purchase, sales and transporting agreements. As part of this process, ACTED will construct an open marketplace for people to sell their goods and produce in a safe shelter in both Maridi and Ibba county, and will pilot a price and commodity information management system in Maridi. The activities target increasing the capacity of businesses and entrepreneurs to develop and expand their businesses, thus increasing their productive potential and helping to secure their future as well as create thriving local markets. The market spaces will be handed over to Market Management Committees and the Chamber of Commerce.

Impact

By providing key productive cooperatives with inputs such as grants, machinery/equipment and transport means, these cooperatives will be able to invest in and increase their productive capacity, as well as transport surplus production to local markets to increase the availability of local produce, as well as increasing their profits from production. Following this, by holding expositions, trade fairs and exchange visits, key cooperatives and producers will have the opportunity to market and advertise their goods to larger businesses and retailers located in the larger market of Juba, thus encouraging trade and business linkages. The businesses in Juba will have the opportunity to see the goods and produce on offer from the areas of Yambio and Maridi. Finally, linking the producers, businesses and transporters will help build up the transport and trade network between Yambio, Maridi and Juba, and again facilitate trade from and between the productive counties and Juba.

Target Group

1. Producer cooperatives
2. Businesses/traders/retailers/transporters
3. Smallholder table sellers.

Direct Beneficiaries

1. 1 open marketplace constructed in Maridi Town: 15,000
2. 1 open marketplace constructed in Madebe centre in Ibba County: 8,000
3. 10 cooperatives supported: 300 cooperative members
4. 6 expositions held: 900 participants
5. 1 price and commodity information management system: 3,000

I.4.5 Revive Food Production and Ecosystems in Vulnerable or Volatile Areas are Resilient to Shocks and Stresses

Through the previous Farmer Field School (FFS) groups ACTED has established (under GIZ-funding), and in conjunction with this project, ACTED will provide some additional

grassroots level support to further strengthen local livelihoods and food security, and revitalize agricultural production in Maridi and Ibba. As ACTED's intervention is focusing on strengthening agro-economic value chains through large-scale productive infrastructure, it is imperative that local grassroots production is also strengthened to ensure that further gaps do not permeate into the value chain. It is vitally important that a holistic approach to strengthening the agricultural value chains is applied to improve resilience and sustainability of the productive agricultural infrastructure. At the same time, some of the productive communities around Maridi are on the outer borderlands of pastoralists who seasonally migrate to find water for their cattle. Effective environmental management is an important component of keeping this potential tension under control.

ACTED will conduct harvesting of ground surface runoff (rainwater); will support perennial food production systems through following regenerative farming practices through cash-for-work; develop biodiversity and will procure tree seedlings from existing /established tree nurseries; and integrate Holistic Land and Livestock Management, to bolster ACTED's previous FSL resilience activities in Maridi and Ibba (through GIZ funding) that is not currently addressing these aspects. This output has three components:

1. Earthworks: water harvesting swales for erosion control, rehydrating landscapes, and recharging groundwater
2. Vegetation: intensive vegetation to improve biodiversity, focusing on kitchen perma-gardens and agroforestry through procurement and distribution of different tree seedlings

In addition, community dialogue between the two groups will be promoted to discuss land-sharing, and joint-activities that promote peaceful coexistence/social cohesion will be explored, such as utilising manure/fertilizer from herders to support agriculture for farmers, and livestock market auctions.

Impact

Supporting and improving ecosystems, inclusion, local dialogue, and natural resource management are necessary pre-conditions for ensuring sustainable production in the area and will support the productive and market infrastructure by linking producers with markets. In addition, this will also address conflicts between cattle keepers and farmers that exist around Maridi. As agricultural production in South Sudan is almost entirely dependent on rainfall, it is extremely susceptible and vulnerable to weather patterns and dry spells, and therefore it is important to reduce this vulnerability by improving access to water for production through rainwater harvesting. Furthermore, by utilising cash-for-work, the output will be heavily community based and participatory, as beneficiaries (IDPs/returnees) will be provided with a short-term source of income which will help support them to meet their immediate needs as they prefer to participate in the economy.

The contours and swales play a significant role in rainwater harvesting, control soil erosion, regenerating environment and support food production through promotion of vegetable production and tree planting. The cash injected in the local economy supports the listed beneficiaries to access household basic needs, like food, health care and household assets to safeguard the household in an event of shocks and stresses. However, the rainfall pattern

in the area is unstable due to climate change. During year one of the project, the rainfall has significantly decreased compared to the previous years. This climate change affected the contours and swale ability to harvest enough water to regenerate environment and increase food production. It is to note that although beneficiaries appreciated the benefits of contours and swales constructed by ACTED, the beneficiaries have expressed desire to venture into other activities more beneficial to them besides contours and swales to support food production. Beneficiaries have reiterated need to use cash for work to support food production, targeting vulnerable household through hand tillage since they do not have access to tractors and oxen which would enable them produce adequate food to meet household consumption needs and market demand. This activity will enable 1,000 household to open an acre of land each and plant a crop desired by the household, through supporting farming directly, beneficiaries will also benefit from agricultural extension trainings and improved farming methods from ACTED which goes along side farming activities.

By reinforcing the cash for work and trainings activities in the area instead of continuing the construction of contours and swales, ACTED will align with beneficiaries identified needs, aiming to support food production and ecosystems in a more sustainable way, promote inclusion and economic growth, and increase dialogue and natural resource management between neighbouring communities in Maridi and Ibba.

Target Group

- FFS groups, farmers and cattle keepers (IDPs and returnee communities) in Maridi and Ibba;
- Direct beneficiaries: 150 FFS members and 1000 CfW = 6,900 total beneficiaries

1.4.6 Construction of Communal Infrastructure

A key lesson learned from ACTED's experience conducting long-term development projects globally, is the need for 'Quick Impact Projects' (QIPs) to garner local support and participation in the whole project at the onset of implementation. The most effective method for this is to address one of the key needs in the project areas through a community-led approach. As such, as assessed in its needs assessment for this proposal, under this Output ACTED will establish and/or rehabilitate water points and sanitation facilities around Maridi and Ibba in order to increase access to and improve quality of water for household consumption as well as sanitation facilities in rural productive communities (especially for IDPs and returnees). In particular ACTED will construct/rehabilitate boreholes and semi-tube wells, and install water storage solutions (e.g., tanks) in key productive areas across Maridi and Ibba, which will provide improved access to water for household usage.

ACTED will also reserve 3% of the total budget per year as a contingency fund, that will be utilised to address any significant contextual changes or challenges that arise which threaten to or do negatively impact on the project activities and objectives, as well as to respond to sudden shocks and crises to act as a crisis modifier. For example, if insecurity in surrounding areas escalates and large influxes of IDPs come to the project locations, ACTED will be well placed to address their needs and support the host community in

coping with the increased population. The contingency fund will improve ACTED's capacity to protect the gains of the project in the face of adverse developments.

The rehabilitated WASH infrastructure will be handed over to CBOs in the relevant communities. ACTED will train members of the CBOs in the operation and maintenance of the infrastructure and provide tools and explore with the CBOs potential mechanisms for securing and applying funds for any future spare parts that may be required (although primary maintenance responsibility lies with local authorities).

Impact

Based on the assessment conducted by ACTED (outlined in the Context section), lack of access to water and health issues have been highlighted as two of the main needs across all the rural communities in Maridi, with only 59% of respondents reporting a borehole or well is their main source of drinking water, and 64% reporting taking over 30 mins to access a water point. Having sufficient access to water is a basic necessity of life, and along with health, are pre-conditions that need to be met for people to be able to not only participate and conduct their livelihoods, but also to thrive and develop. Lack of access to water limits the capacity for people to be able to conduct their livelihoods and other activities, as it requires a significant amount of time and effort to collect water daily for many communities and families. Therefore, as water has been identified by all assessed communities as a key need, the construction of communal WASH infrastructure (water sources and storage tanks) is an essential activity that will address the pre-condition of ensuring that communities have access to water for household consumption. This activity will form a 'Quick Impact Project' that will improve the acceptance, participation, and impact of the project, by engaging the community early (first year) and addressing a key need and gap in the community by ensuring that the targeted communities have access to adequate water. This Quick Impact Project will be essential in ensuring community participation and acceptance of the overall project, by addressing one of the key basic needs and gaps identified by the communities themselves, that will facilitate the rest of the activities planned under this project.

Target Group: Maridi

1. IDPs and returnees in productive areas.

Direct Beneficiaries

1. 11 points constructed: 13,200 direct beneficiaries (11 x 200 households).

I.5 ESMF Purpose and Rationale

ESMF was selected as the environmental and social instrument for assessing, managing, and monitoring environmental and social risks and impacts of the project since the actual project locations, designs are not known, and the impacts cannot therefore be clearly described at the time of project preparation. Given that the sub-projects have not been identified at this stage in project preparation, ACTED will prepare ESMF, to provide guidelines and procedures for assessing environmental and social risks and impacts during implementation.

This ESMF lays out screening processes and tools to be used by ACTED to assess risks and impacts per activity. Using the ESMF, screening will be undertaken for all activities planned (referred to as sub projects) in order to guide preparation of specific E&S instruments for the selected sub projects. The ESMF describes the appropriate roles and responsibilities of ACTED and other stakeholders and outlines the reporting procedures on environmental and social risk issues. It describes the managing and monitoring processes of environmental and social risks and impacts related to the project. It further determines the training, capacity building and technical assistance required for ACTED to successfully implement the provisions of the ESMF and provides practical information resources for implementing the ESMF. The ESMF has been prepared in accordance with applicable World Bank Environmental and Social Standards (ESS) and KfW's Sustainability Guidelines, 2022.

2 METHODOLOGY AND CONSULTATION

2.1 Literature Review

Review of the existing baseline information and literature material was undertaken and helped in gaining a further and deeper understanding of the proposed project. A desk review of the Government of Republic of South Sudan's (GoRSS) legal framework and policies was also conducted in order to the relevant legislations and policy documents that should be considered during project implementation. Among the documents that were reviewed in order to familiarise and further understand the project included:

- ACTED's Project Documents
- World Bank's Environmental and Social Standards
- Environmental and Social Framework
- World Bank Group General Environmental Health and Safety (EHS) Guidelines
- KfW's Sustainability Guidelines, 2022

Legislative Documents

- Transitional Constitutional of 2011
- The Environment Protection Bill, 2010
- Forestry Commission Act, 2003
- Traffic Act
- The Water Act
- Wildlife Conservation and National Parks Protection Act, 2003
- Public Health Act 1975
- Land Act, 2009
- Labour Act, 2017
- Child Act

Policies

- South Sudan Vision 2040
- National Environment Policy 2015-2025
- The Water Policy
- National WASH Sector Strategic Framework
- Forestry Policy 2019
- The National Biodiversity Strategy and Action Plan (NBSAP)
- National Environmental & Social Screening Assessment Framework

Other Documents

- Convention on Biological Diversity (1992)
- International Plant Protection Convention of FAO (1952)
- United Nations Framework Convention on Climate Change (1992)

2.2 Stakeholder Consultations and Discussions

Government officials in the Counties of Yambio, Ibba and Maridi were consulted in the preparation of the ESMF including chiefs in certain Bomas.

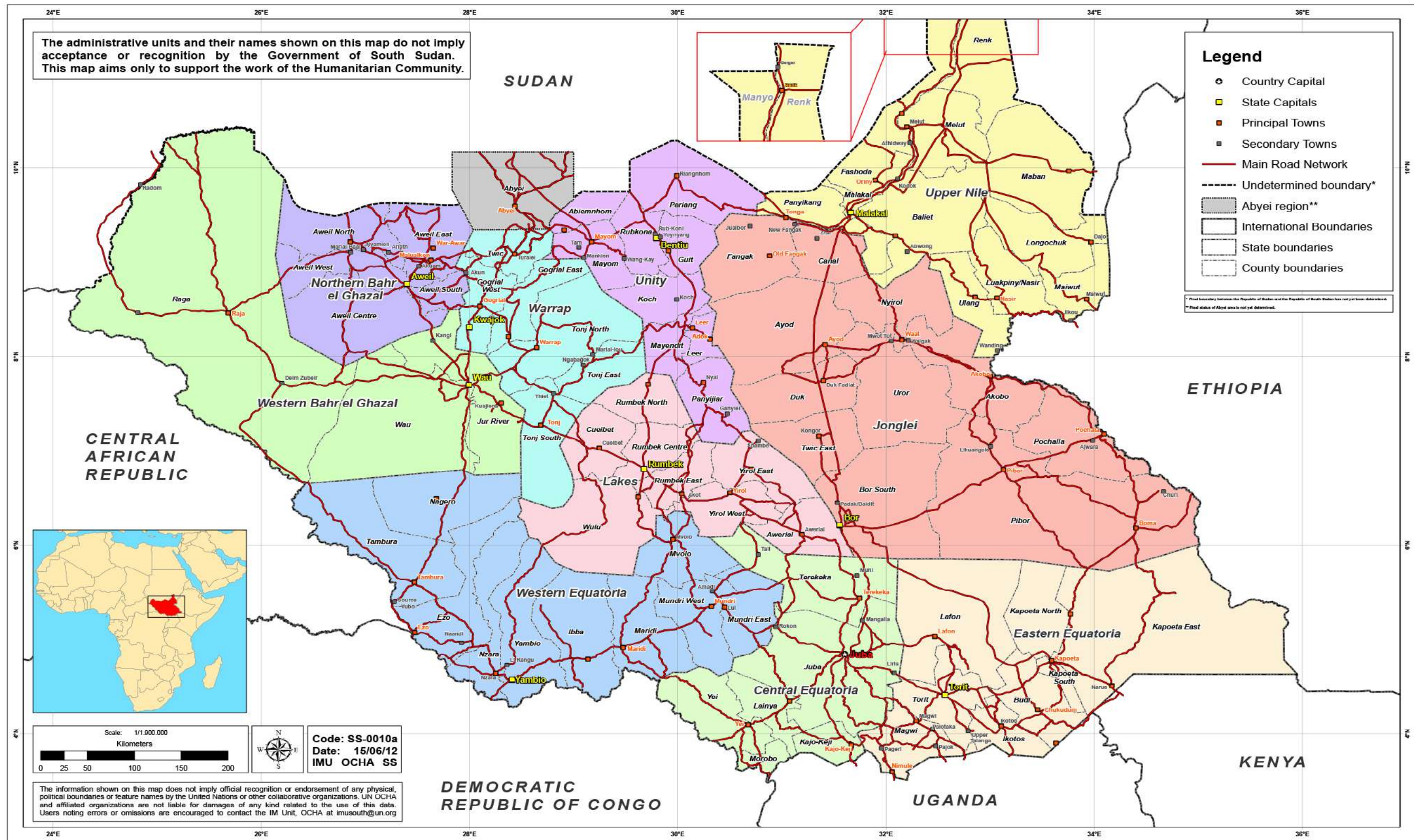
3 BASELINE DATA

This section describes the overall baseline condition of Western Equatoria in terms of bio-physical environment and socio-economic situation.

3.1 Physical Environment

South Sudan is a landlocked country that falls almost entirely (96 per cent) within the Nile River Basin in East-Central Africa. It is bordered in the north by Sudan; by Ethiopia and Kenya in the east; by Uganda and the Democratic Republic of the Congo (DRC) in the south; and in the west by the Central African Republic. It occupies an area of 658,842 km².

Figure 3-1: Map of South Sudan

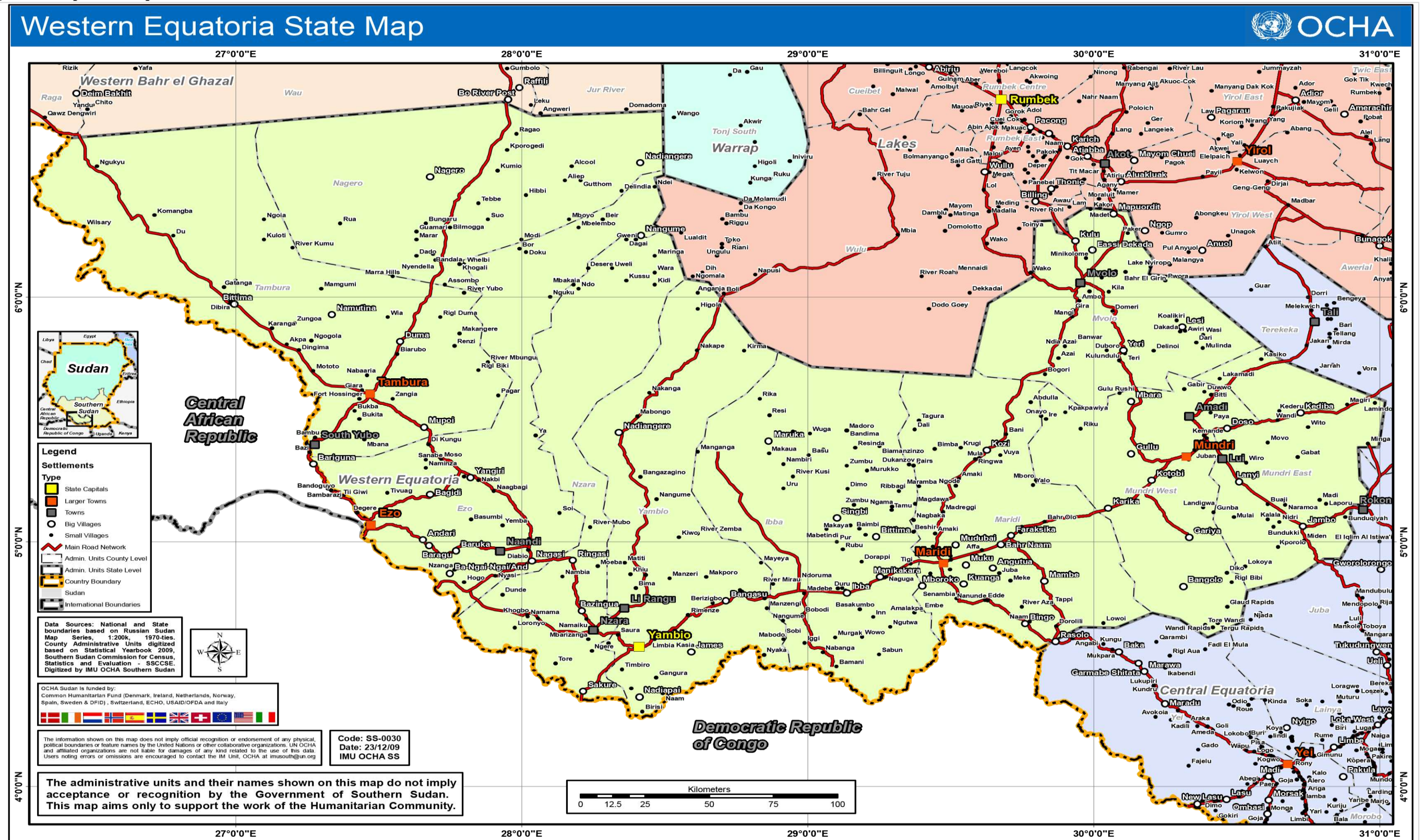


Source: (UN OCHA)

3.1.1 Location and Size-West Equatoria State

Western Equatoria is a state in South Sudan. It has an area of 79,343 square kilometers (30,635 sq mi). Its capital is Yambio. The state was divided into counties, each headed by a County Commissioner. Western Equatoria seceded from Sudan as part of the Republic of South Sudan on 9 July 1956. On October 2, 2011, the state was divided into Amadi, Maridi, and Gbudwe states, and Tambura State was split from Gbudwe state on January 14, 2015. Western Equatoria was re-established by a peace agreement signed on 22 February 2020. Since the 16th century, Western Equatoria had been a home to the Avukaya, Azande, Baka, Moru, Mundu and Balanda.

Figure 3-2: Map of West Equatoria State



3.1.2 Climate

The climate of South Sudan is characteristically hot and dry, with seasonal rains brought on by the annual migration of the Inter-Tropical Convergence Zone. Temperatures range from 25 to 40°C. The growing season is generally between 100 to 250 days, depending on the agro-ecological zone (MOE, 2015). Rain typically falls unevenly across the country; the northeast is drier and precipitation increases towards the southwest. The rainy season differs by location, but it generally occurs between April and November. The lowland areas of Eastern Equatoria, Jonglei, the Upper Nile and Bahr el Ghazal receive annual rainfall between 700 and 1,300 mm. The southeastern tip of Eastern Equatoria receives about 200 mm. The heaviest rainfall occurs in the southern upland areas and lessens towards the north. Western Equatoria and highland parts of Eastern Equatoria receive between 1,200 and 2,200 mm of rainfall annually. Precipitation in South Sudan is impacted by the movement of the Inter-Tropical Convergence Zone (ITCZ).

Table 3-1: Rainfall Zones Classified by Rainfall and Moisture Regimes

Zone	Annual rainfall (mm)	Characteristics
High rainfall zone	> 1,500	The southwestern part of the country, far southeast and Kapoeta Hills, known as the Green Belt. Although rainfall is significant, it only occurs for a limited period (7-8 months) of the year and is highly variable
Pastoralist zone	< 1,000	Most areas of the country in the central, eastern and western parts.
Most areas of the country in the central, eastern and western parts.	< 500	The northeastern part of the country. Rainfall is highly variable.

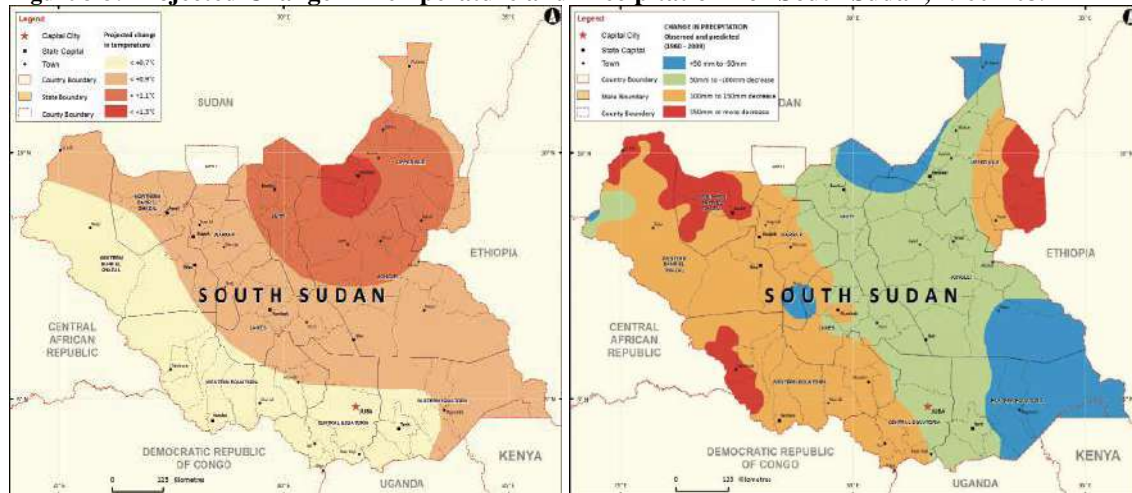
Source: (RSS, 2015)

Figure 3-2: Rainfall Distribution, 2014.



Source: (BRACED, 2016)

Figure 3-3: Projected Change in Temperature and Precipitation For South Sudan, 1960-2039



3.2 Geology and Soils

Soils are important in influencing the potential for agriculture. **Figure 3-4** maps the 34 soil types in South Sudan. Vertisols are a type of clay known as “black cotton soils” that are potentially highly productive but are prone to erosion; they are mostly found in the eastern part of the country (RSS, 2015). Fluvisols, a lowland soil in semi-arid zones that is moderately-to-highly fertile, is found along rivers, lakes, and alluvial plains (FAO, 1993). Leptosols, characteristic of the southwest, are very shallow soils on top of hard rock or highly calcareous materials; they are subject to drought, runoff, and desertification. Lixisols have an unstable soil structure underlain by clay washed down from the surface.

They are found in the western part of the country. Regosols have no significant profile development; they are distributed from the northwest toward the centre. Cambisols are composed of medium and fine textured materials derived from a wide range of rocks and are found in hilly parts of the southern and central areas (RSS, 2015). The Ironstone Plateau is named for the hard, red lateritic soil called ironstone that covers almost the whole region. Lateritic soils are often thin and unsuitable for agriculture (Beswick, 2004).

Western Equatoria geology ranges from Precambrian crystalline basement rocks to Quaternary unconsolidated alluvial deposits. Significant periods of erosion during the Paleozoic and Mesozoic removed the majority of sedimentary cover deposited on the crystalline basement during these times. Tectonic movements of the Rift System during the Paleogene and Neogene Periods (middle to upper Tertiary) led to the formation of large structural basins across Southern Sudan and Western Equatoria. These are generally north-west to south-east trending, perpendicular to the Central African Shear Zone in central Sudan.

The Muglad Basin is the main rift basin in South Sudan, covering an area of approximately 120,000 km² across Western Equatoria and southern Sudan. This basin, along with others in the rift system, received thick fluvial and lacustral deposits during the Pliocene-Pleistocene (late Tertiary to early Quaternary Period). These deposits constitute the Umm Ruwaba Formation. The Muglad Basin contains a number of hydrocarbon reserves which

are exploited for export and domestic consumption. Volcanic activity during the late Neogene and early Quaternary Periods produced the volcanic deposits that outcrop in the Western Equatoria region of South Sudan.

Figure 3-4: Soil Map of South Sudan



Source: (FAO, 2006).

3.3 Landforms and Topography

3.3.1 Topography

The major geographical features of South Sudan are the White Nile, which flows north from Central Africa’s uplands and dominates the centre of the country, and the vast Sudd swamp, one of the world’s largest wetlands. The Sudd swamp is fed by the White Nile and covers over 100,000 km², more than 15 per cent of the country’s area. Rising out of the northern and central plains are the southern highlands along the border with Uganda and Kenya. The Ethiopian highlands border the country to the east, and the Congo River basin highlands are on the southern and western margins (Fernando & Garvey, 2013). **Figure 3-5** maps the country’s topography. The highest point is Mount Kinyeti, at 3,187 m, in the Imatong Mountains (CIA, 2016).

Figure 3-5: Topography of South Sudan



3.3.2 Hydrology

South Sudan's water resources are unevenly distributed both spatially across the country, and temporally, since water quantities vary substantially between years depending on periodic major flood and drought events. The Nile River hydrological basin covers most of the country. Water is held in perennial rivers, lakes, and wetland areas, in seasonal pools, ponds, rivers, streams and extensive floodplains. Water demand is still low given the country's relatively small population, density, and the lack of industrial development, but it is expected to increase rapidly in the future with projected population growth and economic development. In 2007, the Ministry of Water Resources and Irrigation reported that the impact of human activities on the availability and quality of water resources was already evident and a growing concern. There is increased pollution, reduced river flows, declining water tables in urban areas and both surface and ground waters are becoming contaminated (MWRI, 2007).

Figure 3-6: Location of Sub-Basins of The Nile River System (Within South Sudan) Delineated by The Nile Basin Initiative.

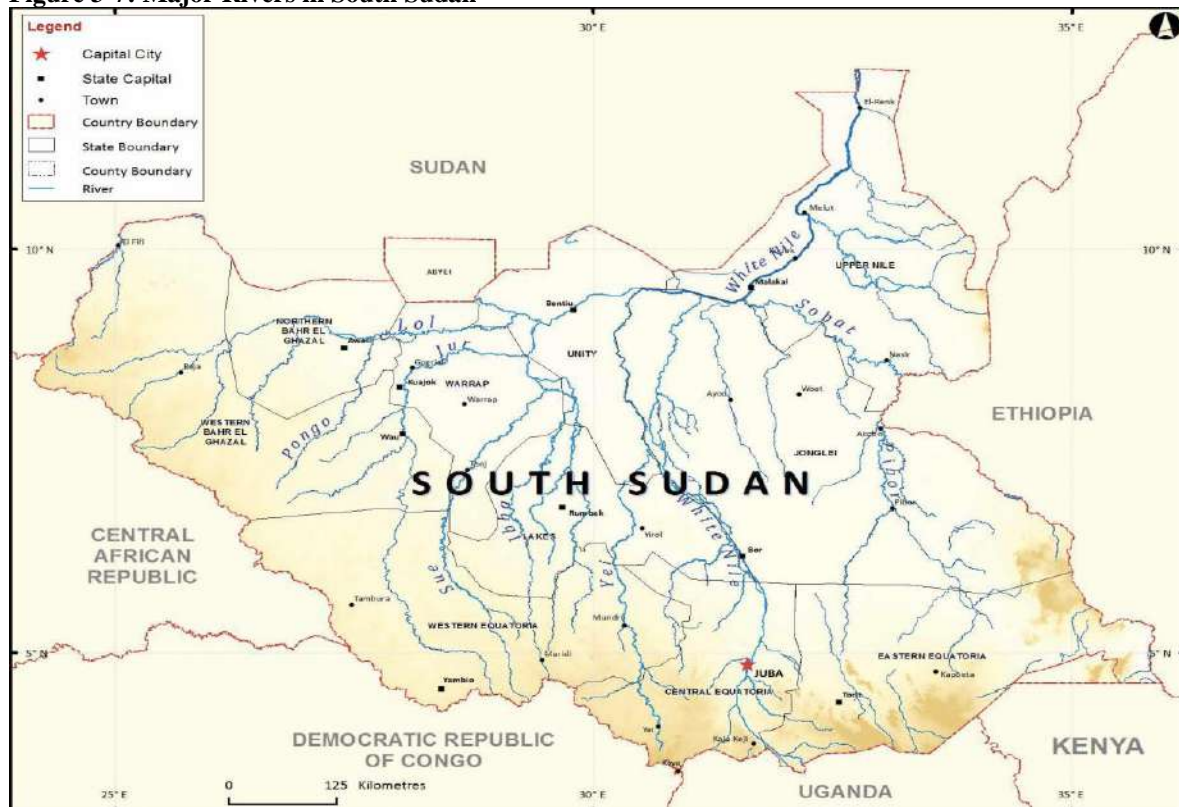


Source: (Bastiaanssen, et al., 2014)

3.4 Major Rivers and Water Bodies

Figure 3-7 names the major rivers that flow within the hydrological basins of South Sudan. About 30 per cent (28 billion m³) of the Nile River’s water flow passes through South Sudan on its way to Egypt (FAO, 2011). The White Nile begins in Lake No, located just north of the Sudd swamp, at the confluence of the Bahr el Jebel and Bahr el Ghazal Rivers, and about 1,156 km downstream of Uganda’s Lake Albert. Lake No is a large shallow lagoon marking the transition between the Bahr el Jebel and the White Nile (Baker, 1997); (NBI, 2016). The long-term average annual flow of the White Nile measured at Malakal is approximately 31 billion m³ (NBI, 2016).

Figure 3-7: Major Rivers in South Sudan



3.5 Ground Water

It is thought that large areas of South Sudan are underlain by rich aquifers that are recharged by seasonal rainfall and river flooding, with some of these underground water reservoirs extending across international boundaries. There is little information on the distribution and hydrology of these underground waters, or about the rates of water extraction and the impacts of human activities, such as potential over-abstraction and pollution (MWRI, 2007).

The Upper Nile artesian aquifer lies in the extreme southern part of the plains of the Bahr el Ghazal, White Nile and Sobat Rivers. The plains collect water and recharge the aquifer internally, while the surrounding mountains act as an external recharge area. Rocks of the Nubian series underlay the Basin's northern parts where the water depth is between 25 to 100 metres, while the water depth in areas of Precambrian rock is between from 3 and 60 metres. The waters in the external recharge area occur at depths of 6 to 10 metres (NBI, 2012). South Sudan shares three transboundary aquifers with neighbouring countries (**Figure 3-8**); to date, there is no sharing agreement between the countries.

Figure 3-8: Aquifers in South Sudan



3.6 Wetlands

About 7 per cent of South Sudan is covered by vast expanses of tropical freshwater wetlands that occur at the confluence of the White Nile’s main tributaries. They have a significant influence on the Nile’s hydrologic regime, storing and releasing water, retaining suspended solids, decreasing dissolved oxygen concentrations, increasing acidity and dissolved carbon dioxide concentrations, reducing sulphate concentrations, increasing total dissolved solids concentrations, and losing water to evapotranspiration (NBI, 2012).

The Sudd, an inland delta of the White Nile, is the country’s largest wetland, covering about 5 per cent of the country’s land area. It is made up of lakes, swamps, marshes, and extensive flood plains. It includes the Bahr el Jebel swamps, the Bahr el Ghazal swamps, the wetlands at the Baro-Pibor-Akobo confluence and the Machar marshes (NBI, 2012).

Figure 3-9 shows the location of the country’s extensive wetland systems.

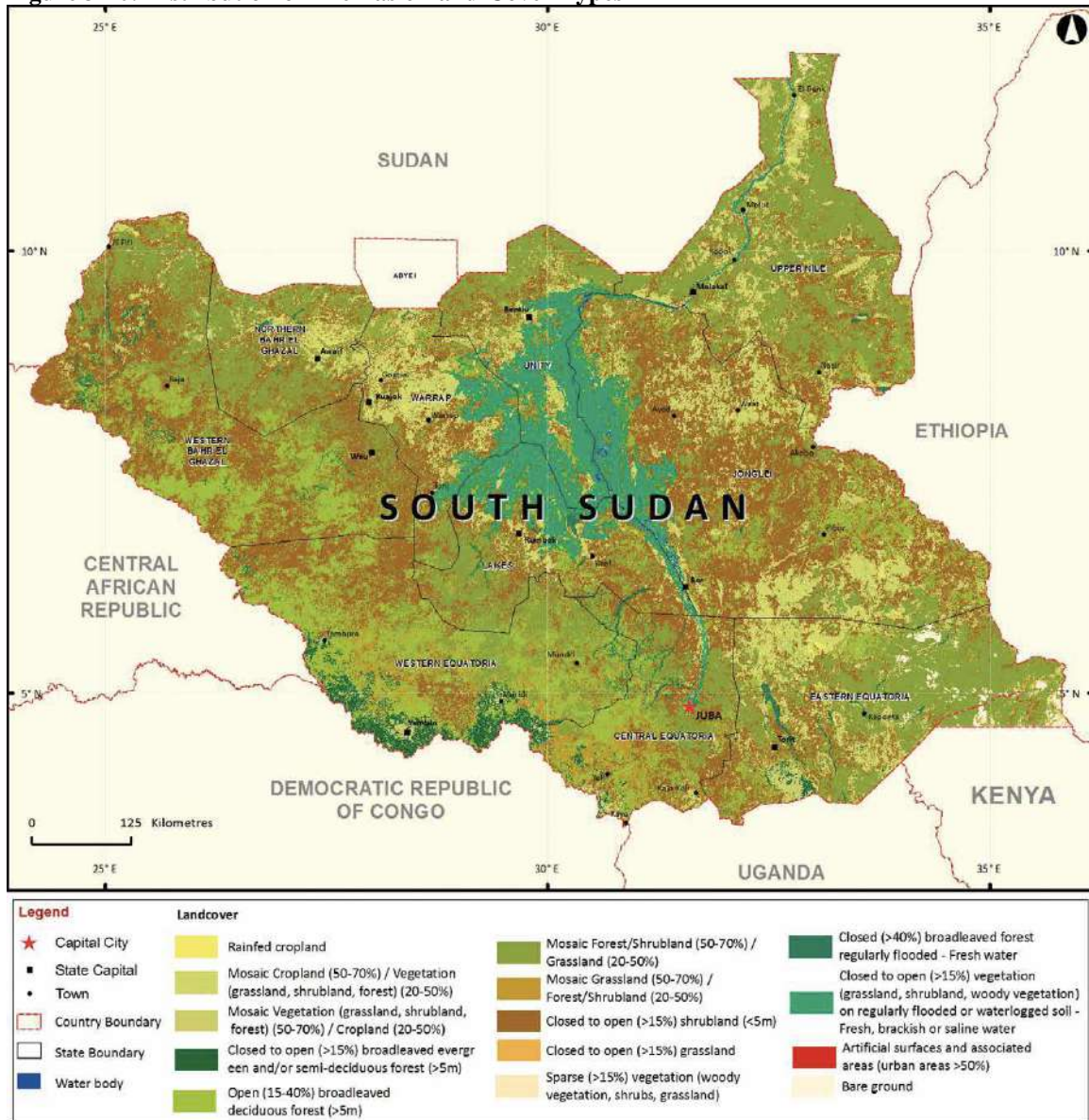
Figure 3-9: Location of Surface Water Resources (Wetlands) of South Sudan



3.7 Land Use and Cover

Most of the country is covered with natural and semi-natural vegetation with variable tree density. Vegetation cover is mostly high in the southwest, with thick tropical forests in the Greater Equatoria region, and low in the southeast and north, where semi-arid savannah dominates. Grasslands, aquatic vegetation, and open water occupy the wetter regions. A large part of South Sudan is covered by the Sudd swamp, a conglomeration of smaller wetlands (Fernando & Garvey, 2013); (RSS, 2016b). **Figure 3-10** shows the distribution of the basic land-cover types (cropland, scrubland, grassland, forests, wetlands, and lakes) and **Table 3-2** provides information on the vegetation and soil types associated with them.

Figure 3-10: Distribution of The Basic Land-Cover Types



3.8 Ecosystems

South Sudan is covered in a rich diversity of ecosystems, which are dynamic complexes of plant, animal and microorganism communities, and their non-living environment, interacting as functional units. South Sudan's large range of ecosystems is most commonly divided into the following categories:

- Lowland forest
- Mountain forest
- Savannah woodland
- Grassland savannah
- Sudd swamps and other wetlands
- Semi-arid region.

Table 3-2: The Ecosystems of South Sudan

Location/Distribution	Characteristics	Status/Threats
1. Lowland Forest		
In the southwest near the borders with the Central African Republic (CAR), the Democratic Republic of the Congo and Uganda and in the foothills of the Imatong Mountains. Also, in small patches on the Aloma Plateau near Yei, the Azza Forest in Maridi County and the Yambio area, and some areas at the foothills of the Imatong Mountains in the Loti, Talanga and Lobone areas of Eastern Equatoria	They are the northernmost of the Congo Basin forests and have similar fauna and flora. Species include the lowland bongo (<i>Tragelaphus eurycerus eurycerus</i>), forest buffalo (<i>Syncerus caffer nanus</i>), giant forest hog (<i>Hylochoerus meinertzhageni</i>), red river hog (<i>Potamochoerus porcus</i>) and a number of forest monkeys	Threatened species include the eastern chimpanzee (<i>Pantroglydytes schweinfurthii</i>), elephants (<i>Loxodonta africana africana</i> and <i>Loxodonta africana cyclotis</i>). A number of forest communities are also threatened.
2. Montane Forest		
Imatong, Dongotona, Acholis, Didinga and Jebel Gumbiri mountains in the southeastern part of former Eastern Equatoria state.	Part of the Eastern Afromontane ecozone, which is one of Africa's biodiversity hotspots. The largest continuous closed canopy forest in South Sudan. Rich with wildlife and endemic plants because of its bio-geographic isolation from similar African montane forests. Home to more than half of the recorded plant species in South Sudan. Common tree species are <i>Podocarpus milanjanus</i> , <i>Juniperus procera</i> (pencil cedar), <i>Croton</i> , <i>Macaranga</i> , <i>Albizia</i> and <i>Arundinalia alpina</i> (bamboo) as well as <i>Vernonia</i> , <i>Hagenia</i> and <i>Erica</i> shrub species. Common animals include the Blue duiker and the bushbuck	Highly defragmented and deforested due to the widespread practice of valley farming, uncontrolled fires coupled with shifting cultivation and land clearance. Soil erosion on the slopes of the Imatong mountains due to cultivation. The Dongotona lost two-thirds of its forest cover from 1986 to 2011; it is likely to be cleared of all vegetation by 2020.
3. Savannah Woodland		
South Sudan's largest ecological region. It is found between the patches of lowland forest to the west and grassland savannah and floodplains to the east in equatorial, Upper Nile and Bahr el Ghazal, where rainfall ranges from 900-1,300 mm. The low rainfall woodland savannah mainly occurs in Upper Nile and covers about 2.9 per cent of the country's total land area while the high-rainfall savannah occupies 52.6 per cent.	Has a rich diversity of flora and avifauna, reptiles, amphibians and invertebrates. Common large mammals of the wooded savannah include the elephant, (<i>Loxodonta africana</i>), hippopotamus (<i>Hippopotamus amphibius</i>), waterbuck (<i>Kobus llispiprymnus</i>), giraffe (<i>Giraffa</i> spp.), bushbuck (<i>Tragelaphus scriptus</i>), Oribi (<i>Ourebia ourebi</i>), duikers (<i>Cephalophus</i> spp.), Uganda kob (<i>Kobus kob thomasi</i>), warthogs (<i>Phacochoerus africanus africanus</i>), hartebeest (<i>Alcelaphus buselaphus lewel</i>), giant eland (<i>Taurotragus derbianus</i>), buffalo (<i>Syncerus caffer</i>), various species of primates and carnivores. The dominant species of the high-rainfall wooded savannah are <i>Celtis zenkeri</i> , <i>Chrysophyllum albidum</i> , <i>Mildbraediendron excelsum</i> and <i>Holoptelea grandis</i> . Other common species are <i>Terminalia glaucescens</i> , <i>Albizia zygia</i> , <i>Combretum binderianum</i> , <i>Bridelia scleroneuroides</i> and <i>Dombeya quinqueseta</i> .	In 2007, the natural forests in Western Bahr el Ghazal were intact (they were not affected by the civil war) while mahogany was being harvested in Northern Bahr el Ghazal. The high rainfall forests (i.e., rainforests) have undergone a phase shift due to human-influenced degradation.
4. Grassland Savannah		
A contiguous area of the northern, eastern and southeastern parts of South Sudan's floodplain habitats	Open short grasslands with scattered trees and shrubs, representing the largest area of intact savannah ecosystem left in east Africa. Dominant woody species include <i>Acacia</i> , <i>Balanites</i> and <i>Combretum</i> . Dominant perennial grasses include <i>Hyperrhena</i> , <i>Andropogon</i> and <i>Panicum</i> , amongst others. Some of South Sudan's ungulate migrations	Various mammal species are globally threatened, such as the cheetah (<i>Acynonix jubatus</i>), wild dog (<i>Lycan pictus</i>), lion (<i>Panthera leo</i>), leopard (<i>Panthera pardus</i>), elephant (<i>Loxodonta Africana</i>), Nubian giraffe (<i>Giraffa camelopardalis amelopardalis</i>) and the Kordofan giraffe (<i>Giraffa camelopardalis antiquorum</i>).

	partially occur here, including migrations of the White-eared kob (<i>Kobus kob leucotis</i>) and the Tiang (<i>Damaliscus lunatus tiang</i>).	
5. Sudd Swamp and other wetlands		
These include the Sudd and Machar swamps	Typha dominguensis, the dominant vegetation, covers about three-quarters of the total swamp. Cyperus papyrus forms the central core. There is a diversity of small and juvenile fish and macro-invertebrate fauna. Wildlife includes elephants (<i>Loxodonta africana</i>), buffalos (<i>Syncerus caffer</i>) and several other mammal species. The Nile crocodile (<i>Crocodylus niloticus</i>) and African rock python (<i>Python sebae</i>) are among the species of snakes and amphibians. There is a diversity of resident and migratory birds, including the globally important and largest population of shoebill stork (<i>Balaeniceps rex</i>) in Africa, with an estimated population of 5,000, the white stork (<i>Ciconia ciconia</i>), black tern (<i>Chlidonias nigra</i>), saddlebill stork (<i>Ephippiorhynchus senegalensis</i>) and black-crowned crane (<i>Balearica pavonina</i>).	Invasive alien plant species and encroachment of cattle threaten the swamp's wealth and diversity. Water hyacinth (<i>Eichornia crassipes</i>) now forms an almost ubiquitous floating fringe along its river channels and lakes. Threatened species include the Hippopotamus and near-threatened species include the sitatunga (<i>Tragelaphus spekei</i>). The Jonglei canal project would threaten the Sudd wetland's future. Threatened species include the endangered white pelican (<i>Pelecanus onocrotalus</i>), which flies over 2,000 km from Eastern Europe and Asia to reach the Sudd's floodplains and the vulnerable black-crowned crane (<i>Balearica pavonina</i>).
6. Semi-arid region		
Occupies the extreme southeastern parts of Eastern Equatoria in and around the Ilemi Triangle and around Renk in the north.	<p>Patches of open short grasslands and Acacia bushland. An extension of the northeastern Kenyan semi-arid zone, so it shares the same fauna and flora.</p> <p>The most abundant large mammal species is Grant's gazelle (<i>Gazella granti</i>), followed by Beisa Oryx (<i>Oryx beisa</i>), and lesser kudu (<i>Tragelaphus imberbis</i>).</p> <p>Elephant (<i>Loxodonta africana</i>) and common eland (<i>Taurotragus oryx</i>) are also present in Loelle (Ilemi triangle area).</p>	Depending on the unpredictable annual rainfall, the groundcover is generally poor. There is also ongoing elephant poaching.

Sources:(Grossmann, et al., 2009) ;(MOE, 2015); (USAID, 2014); (CEPF, 2016); (PhysOrg, 2016)

3.9 Wetlands

Wetlands are one of the most extensive and significant of South Sudan's ecosystems, covering 14.7 per cent of the country's land area (RSS, 2015). The definition of wetlands adopted by the Ramsar Convention on Wetlands is "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres" (Ramsar, 1971). Figure 3-11 shows the location and distribution of South Sudan's principal wetlands, the most important of which are the Sudd and Machar swamps.

About 7 per cent of South Sudan is covered by vast expanses of tropical freshwater wetlands that occur at the confluence of the White Nile's main tributaries. They have a significant influence on the Nile's hydrologic regime, storing and releasing water, retaining suspended solids, decreasing dissolved oxygen concentrations, increasing acidity and dissolved carbon dioxide concentrations, reducing sulphate concentrations, increasing total dissolved solids concentrations and losing water to evapotranspiration (NBI, 2012).

The Sudd, an inland delta of the White Nile, is the country’s largest wetland, covering about 5 per cent of the country’s land area. It is made up of lakes, swamps, marshes, and extensive flood plains. It includes the Bahr el Jebel swamps, the Bahr el Ghazal swamps, the wetlands at the Baro-Pibor-Akobo confluence and the Machar marshes (NBI, 2012). **Figure 3-11** shows the location of the country’s extensive wetland systems.

Figure 3-11: Wetland Complexes in South Sudan



Source: Map created from data provided by WCS.

3.10 Protected Areas

In South Sudan, at the national level, there are the following types of protected areas: National Parks, Game Reserves and Forest Reserves. Sudd wetland is a Ramsar site, which is an international classification (**Figure 3-12**). In total, the existing and proposed protected areas cover about 174,119 km², which represent about 28 per cent of the country’s land area (**Table 3-3**).

Table 3-3: Protected Areas Under the Ministry of Wildlife Conservation and Tourism (Wildlife Conservation and Protected Areas Bill 2015)

National Parks	Game Reserves	Others and Proposed Protected Areas
Badingilo National Park (1986)	Bangangai Game Reserve (1939)	The Sudd (Ramsar Site 2006)
Boma National Park (1986)	Bire Kpatous Game Reserve (1939)	Imatong Mountains National Conservation Area (NCA)
Lantonto National Park (1986)	Boro Game Reserve	Lake Ambadi (NCA)
Nimule National Park (1952)	Chelkou Game Reserve (1939)	Lake No (NCA)
Shambe National Park (1985)	Fanyikang Game Reserve (1939)	Forest Reserves
Southern National Park (1939)	Juba Game Reserve (1939)	

	Kidepo Game Reserve (1975)	
	Mbarizunga Game Reserve (1939)	
	Mushra Game Reserve.	
	Numatina Game Reserve (1939)	
	Zerif Game Reserve (1939)	

Source: (MOE, 2015)

Figure 3-12: South Sudan’s Protected Areas and Proposed Extensions



Source: Redrawn map from Wildlife Conservation Society

3.11 Socio-Economic Background

3.11.1 Population

In mid-2017, the population of South Sudan was estimated at 13,091,132 based on the latest United Nations estimates (Worldometers, 2017). Jonglei is the most populous area, with 16 per cent of the total population, and Western Bahr el Ghazal is the least populous area with only 4 per cent of the total. The highest population densities are along the Nile River and their tributaries (Figure 3-13). The majority of the population of South Sudan is young and lives in rural areas. About two-thirds of the population is under the age of 30 (World Bank, 2016c) and more than three quarters, or 81 per cent of people live in rural areas (RSS, 2010). In northern Bahr el Ghazal, 92 per cent of the population is rural while in Western Bahr el Ghazal, the proportion is 57 per cent (MOE, 2015). The main towns are Juba, the capital, Wau and Malakal.

Western Equatoria population was 619,029 persons in 2008. Western Equatoria male population was 318,443 persons in 2008. Western Equatoria female population was 300,586 persons in 2008. Western Equatoria population aged 65+ was 18,910 persons in 2008.

Figure 3-13: Population Distribution in South Sudan



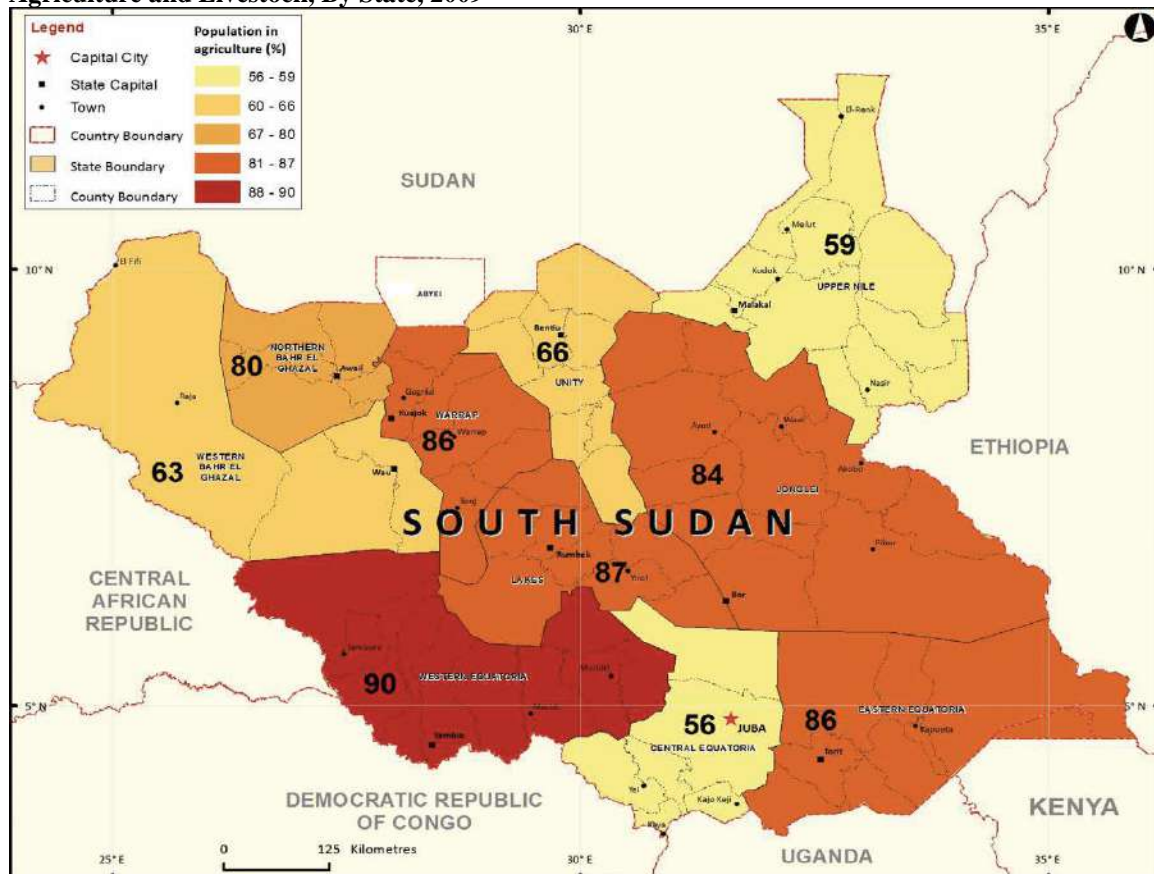
Map created by EPI with data from CIESIN, Columbia University, USA.

3.11.2 Agriculture

In South Sudan about 80 per cent of the population lives in rural areas where subsistence agriculture is the mainstay of people’s livelihoods. The agriculture sector is characterised by small, hand-cultivating household units belonging to larger family aggregations practising different combinations of rain-fed agriculture, livestock grazing and pastoralism, wild food harvesting and fishing (MOAF, 2013); (EU, 2016). About 81 per cent of households cultivate land, 74 per cent own livestock and 22 per cent engage in fishing (RSS, 2015) (**Figure 3-14**).

Although agriculture is the backbone of the subsistence economy of South Sudan (BRACED, 2016a), production is very low. A 2012 analysis showed that the total value of agricultural production (or “realised potential”) was about US\$800 million (US\$600 million from crops) or less than US\$300 per hectare; this result is much lower than production figures in neighbouring countries (Diao, You, Alpuerto & Folledo, 2012). In 2009, the agriculture sector contributed one-third of the country’s GDP (UNDP, 2012).

Figure 3-14: Percentage of The Population Living in Households Whose Main Livelihood is Agriculture and Livestock, By State, 2009



Source: (World Bank, 2011)

Conflict and climate-driven shocks in Western Equatoria have significantly damaged agricultural production, which is Western Equatoria and South Sudan’s primary economic sector and source of livelihoods. According to the Food and Agriculture Organization of the United Nations, up to 95 percent of Western Equatoria rely on farming, herding, or fishing. Disruption to this sector causes substantial repercussions for Western Equatoria region economy, causing dramatic increases in food prices, disrupting markets and trade, preventing adequate food production, and worsening food insecurity.

3.11.3 Agro-Climatic Zones

Climate and soils are primary determinants of the type of agricultural occupations that can be undertaken, and how, where and when they occur. Generally, mixed cultivation takes place in the Green Belt, and livestock rearing, and extensive cultivation are practised in the Ironstone Plateau and semi-arid zones (EU, 2016). **Figure 3-15** maps the country’s six main agro-climatic zones. As described in section 3.1.5, rainfall varies by region, ranging from 500 mm a year in the north to about 1,500 mm a year in the southwest (**Table 3-5**). There is thus adequate rainfall for a range of crops. The growing season in the north is from 100-150 days, and in the southwest, it is 150-250 days (ASPF, 2012).

Figure 3-15: Agro-Climatic Zones Of South Sudan



Source: (USAID, 2014)

Table 3-4: Rainfall Zones Classified by Rainfall and Moisture Regimes

Zone	Annual rainfall (mm)	Characteristics
High rainfall	> 1,500	The south-western part of the country and far southeast and Kapoeta Hills, known as the Green Belt. Although rainfall is significant, it only occurs for a limited period (7-8 months) of the year and is highly variable. Irrigation would be supplementary to the rainfall to produce a second crop and increase productivity
Pastoralist	< 1,000	Most areas of the country in the central, eastern and western parts. Irrigation would provide livelihood options and increase food production.
Moisture deficit	< 500	The north-eastern part of the country. Rainfall is highly variable. Irrigation could secure and increase food production and improve livelihoods.

There are two rainy seasons (**Figure 3-16**) that contribute to determining agricultural potential, the timing of crop planting and harvesting, and the movements of pastoralist peoples.

Figure 3-16: Seasonal Calendar in a Typical Year

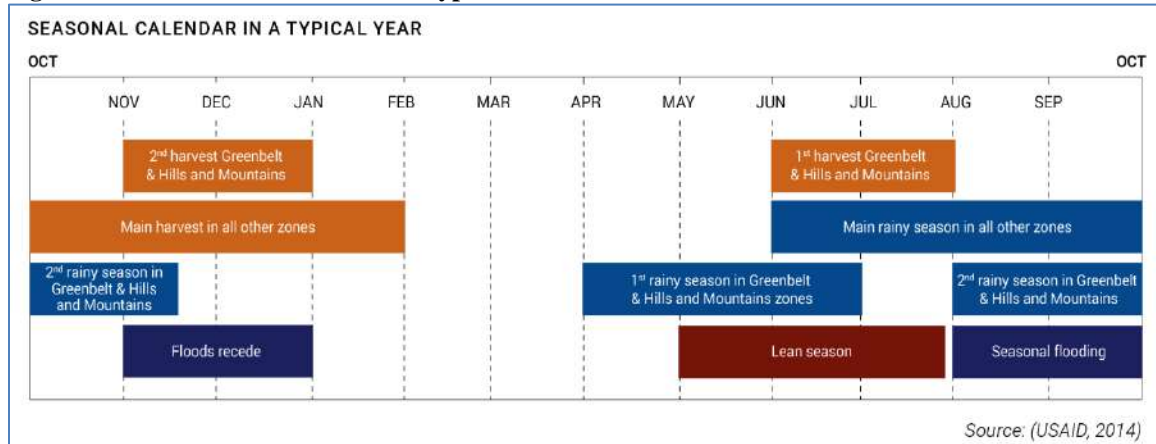


Table 3-5: Agricultural Use of The Six Agro-Climatic Zones

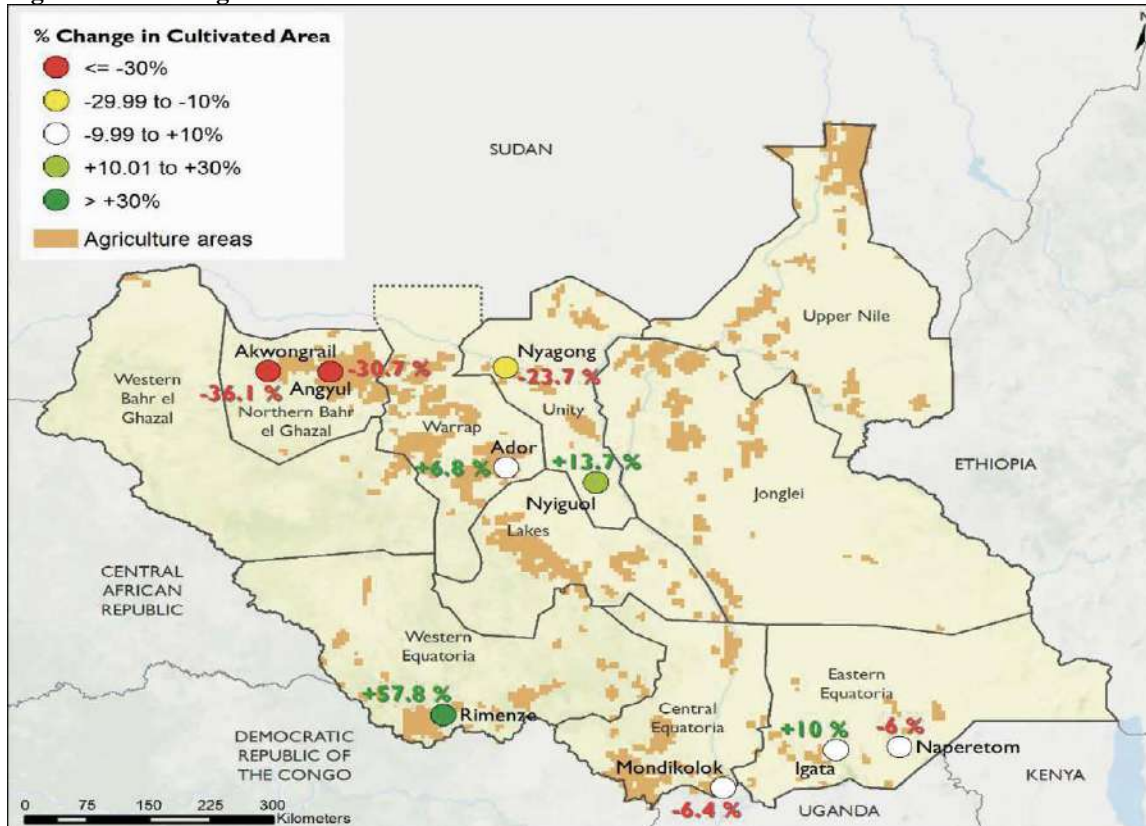
Agro-Climatic Zone	States	Characteristics	Agricultural Livelihoods
Arid /Pastoral	Jonglei, Eastern Equatoria	This zone receives an average of less than 400 mm of precipitation a year. The soils are shallow and unsuited for crops	Pastoralism is the main livelihood activity, characterized by seasonal migrations of people and their livestock in search of water and pasture.
Green Belt	Western Bahr el Ghazal, Western Equatoria, Central Equatoria, Eastern Equatoria	The green belt is found in the southern parts of Eastern Equatoria, Central Equatoria and the western parts of Western Equatoria. This zone has rich soils and enjoys two rainy seasons, except for the southern part of Eastern Equatorial state, which receives little precipitation.	Farming is the main livelihood activity, especially in the southwest part of the zone, and there is often surplus production. In drier areas there is increasing reliance on root crops and exchange.
Floodplains	Western: Bahr el Lakes, Eastern: Upper Nile Northern Ghazal, Warrap Jonglei,	This is a wetland zone, which includes the vast Sudd swamps.	Livestock and crop growing, supplemented by fish and wild foods, are the main livelihoods in the western part of the Floodplain Zone; these occupations are similar in the eastern floodplain with the addition of game hunting.
Hills and mountains	Central Equatoria, Eastern Equatoria, Jonglei	Hills and mountains are found along the Nile to the north of the Greenbelt.	There are a variety of different livelihood activities in this zone, with a focus on agriculture and pastoralism. In difficult years when crops fail, people rely on cattle, trade and root crops

Ironstone plateau	Northern Bahr el Ghazal, Western Bahr el Ghazal, Warrap, Lakes, Western Equatoria, Central Equatoria, Eastern Equatoria	This zone occupies most of Bahr el Ghazal, west of the River Nile, and has thin lateritic soils.	Crop production is the main activity in this zone, which shares a border with the more productive Greenbelt from which local communities can access food surpluses when needed.
Nile and Sobat Rivers	Jonglei, Unity, Upper Nile	This zone is a corridor along the banks of the Sobat River, which flows from Ethiopia and is fed by tributaries before draining into the Nile.	This zone is mostly occupied by wetlands. Pastoralism, fishing and gathering wild foods are the main livelihood activities; there is limited crop production.

Sources: compiled from (USAID, 2014); (FEWS NET, 2013); (RSS, 2015); (Fernando & Garvey, 2013)

The area of cultivated land in South Sudan has historically ranged between 1 to 3 per cent of the total land base (or 650,000 – 1,300,000 ha) (MOAF, 2013). Large-scale mechanised farms cover only a quarter of all cultivated land (UNDP, 2012). The area of land cultivated fluctuates according to a number of factors. The influx of returnees in 2008, for example, led to the expansion to about a million hectares under cultivation (MOAF, 2013). Other factors can lead to declines in the area of land cultivated. The United States Geological Survey and Famine Early Warning Systems Network analysed high-resolution imagery of specific arable areas between 2012 / 2013 and 2016 and found an overall decline of 7.7 per cent in the total area planted.

Figure 3-17: Change in Area Cultivated Between 2012/2013 And 2016 For Nine Sites in South Sudan

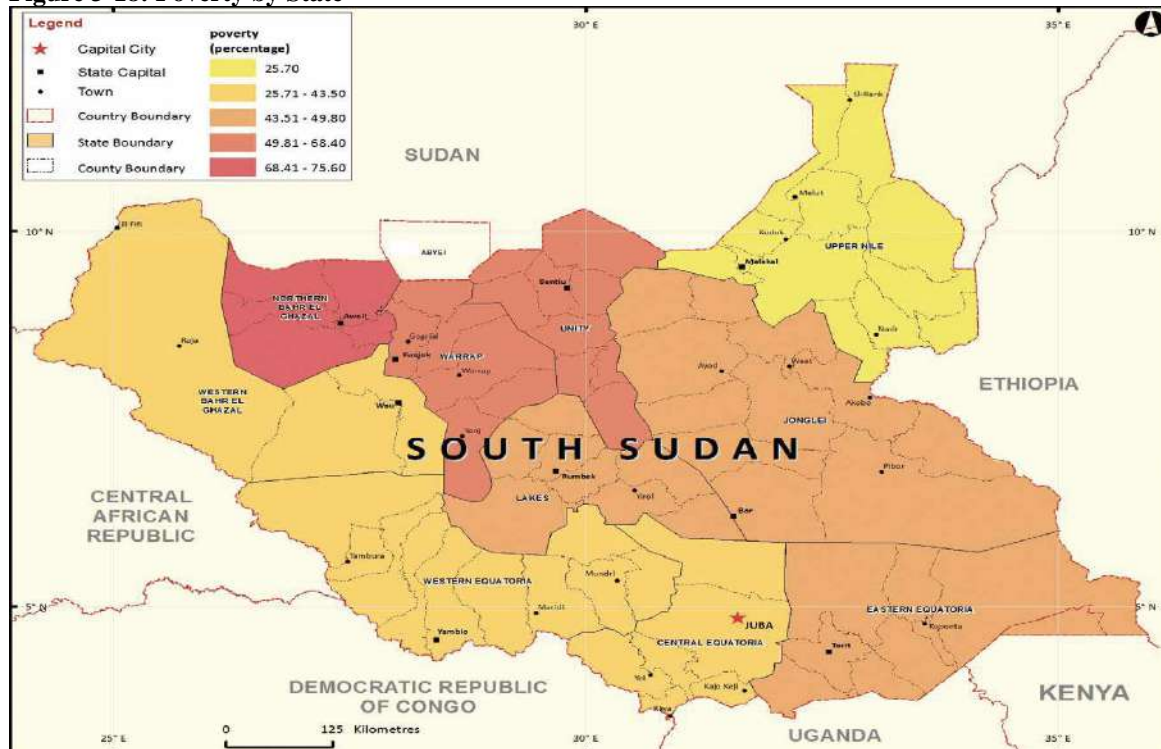


3.11.4 Poverty, Health and Gender

By region, poverty is highest in Northern Bahr el Ghazal (**Figure 3-18**). Fifty-nine per cent of female-headed households are poor compared to 48.1 per cent of those headed by males. Poverty levels decline significantly with higher levels of education; of households headed by an uneducated person, 55.4 per cent are below the poverty line compared to 26.4 per cent of those with some secondary education (RSS, 2016b).

In South Sudan, most people directly depend on being able to cultivate the land or graze their livestock on pastures and collect water and fuelwood from nearby sources. There are a variety of circumstances and events that can affect the environment, thereby disrupting livelihood activities and potentially worsening food scarcity or triggering a decline into poverty. They range from natural disasters, such as floods, droughts and fires, to livestock and crop diseases and pests, all of which can destroy or degrade the natural resources people need to survive. Droughts or floods affect over half the population of South Sudan and about 42 per cent are affected by crop diseases or pests.

Figure 3-18: Poverty by State



Source: (RSS, 2016b)

In Western Equatoria region, you may find medical facilities, both in towns as well as in remote areas, woefully short of the standards of services in the region. Hospitals and medical centers are only a few in numbers. Moreover, medical supplies are also severely limited. Western Equatoria region has a fragile healthcare system, which now suffers from several drawbacks because of economic and managerial reasons. Prolonged political instability and sanctions have only exacerbated the situation. The total life expectancy for males and females is estimated to be around 62 and 66 years respectively, which is regarded as the average of least developed countries. The region falls into the category of a lower-

middle-income country, where the vast majority of the population is below the poverty line. Average healthcare centers are in very bad shape. Frustrated about the crunch of resources, healthcare professionals either show total apathy or in some cases go the extra mile themselves to help patients. In most hospitals, medical professionals treat patients with indifference. Patients may end up spending all their money to buy medicines. Going to a public health facility in Western Equatoria region hasn't been a pleasant experience for many. Such facilities either lack resources or doctors here are pushing themselves way too much. Private medical centers are slightly better equipped, though they also face scarcity of resources and healthcare professionals. The gap between the rich and the poor is increasing every day. If someone is short on money, they will struggle to find quality treatment even at private healthcare facilities. Even if you have enough funds, you are not likely to get the best of healthcare in Western Equatoria region. For all practical purposes, the country now has a healthcare system where patients have to bear the cost of the complete medical treatment, from basic scans to injections.

3.11.5 Transport

The country's road, rail and river networks link its major settlements and rural hinterlands within the country and connect it to neighbouring nations (Figure 3-19). Most river ports are located along the Nile River. Although there is no functioning railway, the railway track from Sudan to Wau in Western Bahr el Ghazal State still exists (MOE, 2014).

Figure 3-19: South Sudan's Road Network, 2011



Source: redrawn by EPI from a map by World Food Programme

4 DESCRIPTION OF THE ADMINISTRATIVE, POLICY AND REGULATORY FRAMEWORK

This chapter outlines and highlights the relevant institutional and legal as well as policy framework in GOSS. These legislative, policy and institutional frameworks have a direct bearing on ACTED's **Reconstruction and Strengthening of Productive Infrastructure and Value Chains across Displacement Regions in SSD**. The chapter further highlights the World Bank Environmental and Social Standards (ESSs) and KfW's Sustainability Guidelines, 2022 relevant to the project including a comparative analysis and gaps existing between the ESSs and host country regulations and suggestions on bridging the gaps. Finally, a section on international laws and conventions that bear relevance to the implementation of this project have also been highlighted in this chapter.

4.1 The Legal, Regulatory and Policy Framework

4.1.1 Transitional Constitutional of 2011

The Transitional Constitution of the Republic of South Sudan 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 health environment; (2) every person shall have the obligation to protect the environment for the benefit of present and future generations; and (3) Every person shall have the right to have the environment protected for the benefit of present and future generations, through reasonable legislative action and other measures that:

- a) Prevent pollution and ecological degradation.
- b) Promote conservation; and
- c) Secure ecologically sustainable development and use of natural resources while promoting rational economic and social development so as to protect the biodiversity of South Sudan.

Furthermore, Article 166 (6) expects local governments involve communities in decision making in the promotion of a safe and healthy environment while Article 49, obligates the Citizen to protect the environment and conserve natural resources.

Relevance:

The Constitution is the primary document which guides on environmental and social issues connected to this project. It also outlines the rights and obligations of parties. Project preparation, including the preparation of all safeguard documents and project implementation must be done in accordance with constitutional dictates.

4.1.2 Comprehensive Peace Agreement

The Comprehensive Peace Agreement (CPA) signed on 9th January 2005 between Sudan's People Liberation Movement (SPLM) and the Government of Sudan (GoS) provided for an establishment of a new constitutional framework including a new Interim National Constitution to be the supreme law of the land to govern Sudan during the six-year interim period specified in the agreement.

Section 5 of the CPA states that: *‘All persons performing governmental functions shall continue to do so at the place at which they render such services or perform such functions unless or until redeployed or alternative institutions are received in accordance with the arrangements agreed to by the Parties’*. Consequently, all the laws enacted by the SPLM Civil Administration during the war will still be in force until alternative Government of South Sudan (GOSS) laws shall be provided. Equally, all the laws enacted by the then Government of Sudan before the signing of the CPA, which has national territorial enforceability, will continue to exist, and remain applicable until amalgamated, or an alternative law is enacted. As such, all levels of government, and all arms of government; including the judiciary and executive are duty-bound to respect and observe such laws until alternative laws are enacted.

4.1.3 The Interim Constitution of Southern Sudan

The Interim Constitution of Southern Sudan (ICSS) was signed into law on 5th December 2005 and is compatible with INC. All these legislation Sources mandates the Government of the Republic of South Sudan (GRSS) to develop policies and strategies for reconstruction and development of Southern Sudan. Several development policies and strategies have been done in consultation with sector stakeholders, based on local experience and international ‘best’ practice. Based on the above legislation sources, the following legislative acts will govern land acquisition, resettlement, and compensation activities.

Article 174 (1) (ICSS): ‘The institution status and role of traditional authority, according to customary law, are recognized under this Constitution’.

Article 174 (3) (ICSS): ‘The courts shall apply customary laws to the Constitution and the law’. **Article 175 (1) (ICSS):** ‘Legislation of the states shall provide for the role of traditional authority as an institution at local government level on matter affecting local communities’. **Article 175 (2) (ICSS):** ‘Legislation at the Southern Sudan and States level shall provide for the establishment, composition, function, and duties of the Councils of Traditional Authority Leaders’.

Article 180 (4) (ICSS): ‘All lands traditionally and historically held or used by local communities, or their members shall be defined, managed and protected by law in Southern Sudan’.

4.1.4 The Interim National Constitution

The Interim National Constitution (INC) was signed into law on 9th July 2005. It is based on the CPA and the Sudan Constitution of 1998.

4.1.5 The Interim Constitution of Southern Sudan

The Interim Constitution of Southern Sudan (ICSS) was signed into law on 5th December 2005 and is compatible with INC. All these legislation Sources mandates the Government of the Republic of South Sudan (GRSS) to develop policies and strategies for reconstruction and development of Southern Sudan. Several development policies and strategies have been done in consultation with sector stakeholders, based on local

experience and international ‘best’ practice. Based on the above legislation sources, the following legislative acts will govern land acquisition, resettlement, and compensation activities.

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Article 180 (4) (ICSS): ‘All lands traditionally and historically held or used by local communities, or their members shall be defined, managed and protected by law in Southern Sudan’.

4.1.6 The Environment Protection Bill, 2010

This law is intended to coordinate all matters relating to the environment and to be the principal instrument of government in the implementation of all policies relating to the environment. Among other things, it provides for the preparation of a National Environmental Action Plan; and designation of Environmentally Sensitive Areas (ESAs) for the actual or prospective habitat of any environmentally sensitive species required to be protected for the purpose of meeting the government’s international obligations under any of the Multilateral Environmental Agreements (MEAs). Section 18 of the Bill introduces the requirement for Environmental Impact Assessment (EIA) while environmental audits are dealt with under Section 19. The Bill further provides for freedom to access environmental information and addresses pollution prevention, control, and waste management.

4.1.7 Forestry Commission Act, 2003

The Forestry Commission Act establishes the Forestry Commission. The Commission is responsible for the regulation, management and utilization of forests and forestry resources of South Sudan and the co-ordination of policies in relation to them. It also carries out the following functions;

- Educating the public on the effective and efficient utilization of forests, forestry resources and matters concerning forests generally
- Cooperating and liaising with the national, regional, and international organizations and agencies on matters of forests, conservation, utilization, and environmental issues generally.

4.1.8 Traffic Act

Section 74 of the Traffic Act highlights the procedures for the closure of roads. It states that the highway authority or its authorized representative may for public interest, close the whole or part of such a road to all vehicles or any particular type of vehicle at any time for

any period it thinks fit. The Act also empowers the Commissioner to impose on any road, such lower speed limit as he considers necessary by reason of repairs, reconstruction or damage to the road or the condition of the road, for public safety or to prevent damage to the road.

4.1.9 The Water Act

Its objective is to promote effective management of the quantity, quality, and reliability of available water resources in order to maximize social and economic benefits while ensuring long-term environmental sustainability. It provides a legal basis for the National Water Policy. Outlines protection of groundwater and surface water resources from pollution, erosion, and other adverse effects by creating protected zones in catchment areas draining into any water supply facility, lake, reservoir, aquifer, wetland, spring, or other water source. Develops procedures to manage water allocation for different uses, conservation, water quality, water-related disasters, and intersectoral coordination.

4.1.10 Wildlife Conservation and National Parks Protection Act, 2003

This Act covers all matters concerned with wildlife conservation, the establishment and management of protected areas (PAs) and the sustainable management and conservation of South Sudan's natural heritage and wildlife for the benefit of its citizens. It empowers the Director General of the Secretariat to permit anybody to exploit the inherent resources in such protected areas.

4.1.11 Public Health Act 1975

The Act covers prevention of water pollution, inspection of drinking water, disposal of waste and sewage, inspection of industrial areas and bakeries, prevention of air pollution and inspection of waste dumping places and brick kilns.

4.1.12 Land Act, 2009

The Land Act was enacted in 2009 with the objective of promoting land management systems to protect and preserve the environment and ecology for the sustainable development of South Sudan. It prescribes that land may be acquired, held, and transferred through customary, freehold, and leasehold tenure. All citizens hold freehold titles to their lands. Non-citizens may acquire leasehold for specific periods but may not possess land in freehold. It addresses land tenure security, transparency and accountability, resource-based conflicts, and gender bias and discrimination. It also addresses the need for social and environmental impact assessment for planned projects. The Act reinforces government recognition of customary land tenure and provides that; "Customary land rights including those held in common shall have equal force and effect in law with freehold or leasehold rights.'

Section 70 requires that any development activity undertaken in South Sudan be subjected to ESIA to ensure that the social, economic, and environmental implications of the activities on the land are taken into consideration. The act states that Social, Economic and Environmental Assessment be undertaken prior to any activity that may impact on the environment and people as determined by law. It also provides for restoration of any

degraded environment due to economic activities and requires project proponents to prepare resettlement plans for any communities affected by the project.

The law empowers public Authorities to expropriate land for public interest/use subject to 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.

Table 4-1: Permit Procedures in Government of Republic of South Sudan

Institution	Mandate
National Level South Sudan Land Commission State Level	Entertain claims, arbitration and mediation, enforcement of law, accept references and assess compensation
State Land Commission	Entertain claims, arbitration and mediation, enforcement of law, accept references and assess compensation
State Land Administration	Land allocation & mapping. Land measurement and quality evaluation. Land classification. Design land use & approval. Land record & statistics & registration. Land valuation. Assign land use right. Issue land Title deeds. Regulate land transfer and land lease. Control and protect land use. Protect customary land rights; regulate withdrawal or requisition.
Local Level County Land Authority	Hold and allocate public lands with approval of State Ministry Physical Infrastructure and Planning. Make recommendation to the Concerned Ministry on gazetted land planning; advise concerned ministry on resettlement of persons in the County; facilitate the registration and transfer of interest in land; advise the local community on issues related to land tenure, usage, and exercise over land rights; protect community lands; chair the consultation process between community and State Government if required; and liaise with South Sudan Land Commission.
Catchment parameter	Catchment characteristics

At the State level, the Departments of Land and Town Planning and the Surveying Department in the State Ministries of Physical Infrastructure (MOPI) are currently responsible for state-level land administration; town planning; regulation of land tenure, usage, and exercise of rights in land; land survey and registration; and coordination of different levels of land administration and management (S. 43). They are also responsible for maintaining the land registry in coordination with the MOHPP (S. 54 (2)). The State Legislative Assembly deals with legislative matters and the State High Courts and the State Courts of Appeal deal with land disputes at the State level. The Land Act has established the County Land Authorities (CLA) (S. 44) and Payam Land Councils (PLC) (S. 48) with primary responsibility over land matters in their respective jurisdictions.

According to the Land Act, the CLA have the power to “hold and allocate public lands vested in it with the approval of the concerned State Ministry in the State subject to town and municipal planning in the County (s-46). The CLAs also assist the traditional authorities in the exercise of their attributions and advise communities in issues related to

land tenure, usage, and exercise of their rights (s-46). The PLCs are responsible for the management and administration of land in the different Bomas composing the Payam (s-48) and to assist traditional authorities in managing communal land and solving land related disputes arising under their administered territory (s-50).

The law empowers public Authorities to expropriate land for public interest/use subject to 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.

Over ninety percent of land in the project area is communal land and is regulated by customary and traditional rules. The Land Act 2009 recognizes such lands and therefore any project activity is subject to legal duty and obligation to reflect and consider the interests of the communities owning these communal lands.

Section 58 states that community land may be registered in the name of

- A Community or a family in accordance with customary practise applicable:
- A clan or a family in accordance with the customary practises applicable:
- A community association; and a traditional leader in trust for the community and the consent or the members of the community

Section 63 provides that;

- Activities to be carried out by the investors on the communal land shall reflect an important interest for the community or people living in the locality
- The project shall contribute economically and socially to the development of the local community and
- The concerned GOSS ministries and the States (including investment authorities) will consult with the communities concerned on any decision related to the land that the project intends to acquire and the view of the community will be duly taken into consideration

Section 69 provides that:

- Individual, communities, and organizations will protect land in order to keep it in a productive condition in which problems such as and degradation is adequately managed in accordance with the provisions of Article 44 of the ICSS.
- Consultation with the local authorities, traditional leaders, and other levels of the government in Southern Sudan is thus very important. In this process, all the stakeholders have a role to play. For example, the State legislators must define traditional lands that exist in their states. Development and management of such lands by whichever person shall be in accordance with the laws of Southern Sudan.

Land Compensation

The CPA, the INC, and the ICSS direct legislative assemblies of all levels of government to enact laws pertaining to land use, compensation, and respect for traditionally and historically owned lands, and to be defined or managed in accordance with laws.

- **Article 180 (7) (ICSS)** provides that communities and persons enjoying rights in land ownership will be entitled to prompt and equitable compensation on just terms arising from acquisition or development of land in their areas in the public interest.
- **Article 187 (e) (INC)** gives power to the National Land Commission to assess appropriate land compensation.
- **Section 63 of the Land Act, 2009** Provides that; “any community or persons affected by such activities in the area of investment shall be compensated in accordance with the provisions of Section 75 of this Act and Article 180(7) of the ICSS. Such compensation shall be just and equitable as provided for by Section 75 of the Land Act 2009. Mode of such compensation shall be cash or kind as may be determined by the parties by way of a just agreement.

4.1.13 Laws on Gender Equality and SGBV

Article 16 of the Transitional Constitution prescribes that women shall be accorded full and equal dignity of the person with men; that they should have equal pay for equal work and other related benefits to men; and that women shall have the right to participate equally in public life. Section 247 of the Penal Code defines sexual intercourse without consent as rape and defines that consent cannot be given under the age of 18. It further defines that sexual intercourse by a married couple does not constitute rape

4.1.14 Laws and Regulations on Child Labor

South Sudan has ratified some key international conventions concerning Child Labor such as the: (i) Convention on the Rights of the Child (ratified), (ii) African Charter on the Rights and Welfare of the Child (ratified), (iii) Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict (acceded), (iv) Optional Protocol to the Convention on the Rights of the Child on the sale of children child prostitution and child pornography (acceded). Furthermore, Section 12 of the Labor Act and Article 25(3) of the Child Act (Child Act 2009) ;)defines the minimum age for labor as 14 years of age. Section 10 of the Labor Act, Article 22(3) (b) of the Child Act and several Articles of the Penal Code prohibit forced labor.

4.1.15 Labour Relations Act 2017

The purpose of this Act is to establish a legal framework for the minimum conditions of employment, labour relations, labour institutions, dispute resolution and provision for health and safety at the workplace, in accordance with the Constitution of the Republic of South Sudan, 2011, and in conformity with the international and regional obligations of South Sudan. The Labour Act is the reference for the occupational Health and safety considering through different articles: (i) employer cares (articles 110, 111 and 114); (ii) free protection (article 51); (iii) training (article 110) and (iv) labour inspection system (articles 27 and 28).

Some of the key provisions include the following;

- i. There is a prescribed minimum wage. Every minimum wage is to be reviewed within a time period of not more than two years. An employer has to pay an employee all wages/salaries and any other benefits to which the employee is entitled to regularly and in the case of termination, within 30 days from the date on which employment of the employee was terminated, regardless of the cause of such

- termination. The normal working hours are 8 hours a day and 48 hours a week. Employees are also entitled to paid annual leave for every year of service, leave during public holidays and during maternity and paternity.
- ii. On health and safety, every owner of an industry is required to take the necessary precautions to protect workers against industrial accidents and occupational diseases. The employer is responsible for maintaining the workplace; taking reasonable measures to ensure safety; providing information and training as is necessary; provide protection to prevent contamination; take reasonable measures to provide a safe working environment; ensure employees' participation in application and review of safety and health measures; and consult employees and their representatives on all questions related to workplace health and safety.
 - iii. Furthermore, an employee is to take immediate steps to stop any operation and evacuate the employees, if there is an imminent and serious danger to health and safety of employees. An employer cannot dismiss or take disciplinary action concerning an employee who has departed from a hazardous situation. Similarly, the employer cannot require an employee to resume work in hazardous circumstances.
 - iv. Sexual harassment is prohibited. An employer is to ensure that no person sexually harasses an employee during the course of the employee's work for the employer. Employer is required to issue a policy statement on harassment in consultation with workers' representative where number of employed workers is 20 or more. The employer is to make rules and regulations against sexual harassment to govern employer and employees at the workplace. Other prohibited grounds of discrimination enunciated in the Labour Act include race, tribe or place of origin, national extraction, colour, sex, pregnancy or childbirth, marital status, family responsibilities, age, religion, political opinion, disability, health and HIV/AIDS, or participation in a trade union.

4.2 Relevant Sector Policies

4.2.1 South Sudan Vision 2040

The foundation document guiding the future development of South Sudan is the South Sudan Vision 2040: Towards Freedom, Equality, Justice, Peace, and Prosperity for All. Vision 2040 was adopted by the Council of Ministers on January 15, 2010. It is founded upon seven pillars namely, educated, and informed nation; prosperous, productive, and innovative nation; free, just and peaceful nation; democratic and accountable nation; safe and secure nation; united and proud nation; and compassionate and tolerant nation. 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. It speaks to the country's commitment to sustainable environmental management and emphasizes the need to minimize greenhouse gas emissions as a measure against climate change while building on traditional knowledge and supporting community-based resilience.

4.2.2 National Environment Policy 2015-2025

The strategic goal of the National Environment Policy 2015 to 2025 is to ensure the protection, conservation, and sustainable use of the natural resources of South Sudan

without compromising the tenets of inter-generational equity. The policy aims to pursue and archive to develop laws, regulations, and guidelines to ensure sustainable management of the environment as well as the prudent utilization of natural resources. The policy contains ten chapters including chapters on climate change, management of resources, corporate social and environmental responsibilities, and environmental planning. It has the following key objectives;

The main objectives of the Environment Policy are as follows:

- To improve livelihoods of South Sudanese through sustainable management of the environment and utilization of natural resources
- To build capacity of the government at all levels of governance and other stakeholders for better management of the environment
- To integrate environmental considerations into the development policies, plans, and programs at the community, government and private sector levels; and,
- To promote effective, widespread, and public participation in the conservation and management of the environment

4.2.3 The Water Policy

In December 2007, the GoRSS adopted the South Sudan Water Policy. The overall goal of the water policy is to promote effective management of the quantity, quality, and reliability of available water resources in order to maximize social and economic benefits while ensuring long-term environmental sustainability. Key guiding principles for water resources management are as follows: (i) water is a shared resource and appropriate legal frameworks shall be established to govern all aspects of water use; and (ii) water resources planning shall involve all relevant stakeholders and will be undertaken on the basis of natural hydrologic boundaries.

4.2.4 Agriculture Sector Policy Framework for 2012-2017

Provides for the protection of plants, seed management and development of a plant genetic resources conservation programme and a biosafety framework. This includes promoting in situ and community conservation and management of plant genetic resources and creating awareness on plant genetic resources.

4.2.5 National WASH Sector Strategic Framework

The National WASH Sector Strategic Framework operationalizes the National Water Policy and has a specific priority strategic area of water resources management. It describes the overall governance and development strategy within the water sector and recommends the establishment of a Water Council to act as the principal multi-stakeholder advisory body for the water sector. In addition, the strategic framework recommends establishment of a Water Resources Management Authority to enforce regulatory functions on the management and use of water resources.

4.2.6 Forestry Policy 2019

The Forest Policy of 2019 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 aims to achieve ecological stability of river 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 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. It is in line with best practice in sustainable forest management and is based on guiding principles that include sustainable development, poverty eradication, equity, and community involvement.

4.2.7 The National Biodiversity Strategy and Action Plan (NBSAP)

This is the principal instrument for undertaking biodiversity management and conservation in the country. It provides a framework for optimally integrating the management of the country's vast biodiversity resources into national economic prosperity and social welfare targets of the Vision 2040. The document provides a comprehensive review on the status of the country's biodiversity, threats and causes of biodiversity loss in Sudan, describes strategic goals, priority areas and actions and the enabling environment for implementation of NBSAP. It also outlines the financing and implementation arrangement, identifies Strengths, gaps and priority needs in national capacities and technologies for biodiversity management.

4.2.8 Draft Policy on Wildlife Conservation and Protected Areas 2012

Recognises climate change as a global reality with serious implications for natural ecosystems and wildlife resources. The policy calls for designing coping strategies to address the impacts of climate change on habitats and populations of wildlife species.

4.2.9 Forest Policy 2014

Recognises the critical role played by forests in providing "critical environmental services, water catchment and in mitigating climate change." The forestry policy proposes the ratification of the UNFCCC so that the country can benefit from the Clean Development Mechanism (CDM). It also proposes establishing a designated national authority "to facilitate the flow of climate change benefits to South Sudan." The policy also emphasizes the need for measures "so that South Sudan can access financing under REDD." (REDD refers to Reducing emissions from deforestation and forest degradation). It calls for delineation and gazettelement of forests to attain a national forest cover of 20 per cent of land area.

4.2.10 The Water Bill 2013

Aims to provide mechanisms to protect water sources from pollution, erosion or any other adverse effects by creating protected zones within a catchment draining to, or above, any water facility forming part of a water supply or any catchment, lake, reservoir, aquifer, wetland, spring, or any other source of water. It also aims to conserve available water resources, to manage water quality and to prevent pollution of ground and surface waters; manage floods and droughts and mitigate water-related disasters and establish appropriate management structures, including mechanisms for inter-sectoral coordination and stakeholder participation.

4.2.11 National Environmental and Social Screening Assessment Framework

The World Bank developed a National Environmental and Social Screening and Assessment Framework (ESSAF) for South Sudan as a guideline for all World Bank financed development projects. The overall purpose of the National ESSAF is to provide pragmatic operational guidelines and procedures to the GoRSS to eliminate, mitigate the environmental and social risks associated with Bank-financed operations implemented during the transitional period; and to develop procedures for the effective environmental planning and management of selected development projects and their operation. The national ESSAF has been prepared in line with Bank operational policies and procedures for investment operations and the guidance note for crises and emergency operations for application of Bank safeguard and disclosure policies. This Framework was developed within the context of National environmental policy, relevant legislation and regulations and the Interim Constitution and covers all phases of the project cycle.

4.2.12 Proposed Land Policy

Addresses issues such as displacements due to civil wars, natural disasters, land right conflicts and conflicts over pastures and water points.

4.3 Relevant Institutions

Article 47 and 166 of the Transitional Constitution are pertinent when describing the structure of government in South Sudan. According to the law, South Sudan shall have a decentralized government system with the following levels: (i) the National level which shall exercise authority in respect of the people and states in South Sudan; (ii) the State level which shall exercise authority within a state and render public service through the level closest to the people; and the Local Government level within the state, which shall be the closest level to the people. The Local Government shall then comprise of three tiers of government; the County, City, Municipal and Town Councils.

The government of South Sudan has five ministries that deal directly with utilization, management, and conservation of natural resources i.e., Ministry of Environment (MoE), Ministry of Petroleum, Mining, and Industry (MPMI), Ministry of Agriculture, Forestry, Tourism, Animal Resources, Cooperative and Fisheries (MAFTACF), Ministry of Interior and Wildlife Conservation (MIWC), and Ministry of Electricity, Dams, Irrigation and Water Resources (MEDIWR). The institutions at National and State Levels responsible for the implementation and monitoring of compliance with national and international agreements include:

1. Council of Ministers
2. County Land Authority
3. Local government at the County level
4. National and State Land Commissions
5. Payam Land Council
6. State Land Administration and Authority

Beside the government institutions responsible for environmental management, there are also local institutions that play important roles in environmental management at local level.

In the environmental field, such local institutions can play important roles in sanitation and garbage collection beside taking part in mobilization of local communities and providing direct links to the locality for any issues related to village affairs. The table 4-2 highlights some of the key stakeholders connected to this project.

Table 4-2: Highlights Some of The Key Stakeholders

Institution	Roles and responsibilities
Ministry of Environment and Forestry	Tasked with developing policy and regulatory frameworks on environment and forestry. The Directorate of Climate Change and Meteorology in the Ministry develops and implements programmes to address climate change issues and coordinates the implementation of South Sudan’s obligations under the UNFCCC and the Convention on Biodiversity (CBD).
Ministry of Wildlife Conservation and Tourism	Manages protected areas (national parks and game reserves) and protects, conserves, and manages wildlife resources in South Sudan through the Wildlife Service.
Ministry of Agriculture and Food Security	Its mandate is to develop and implement policies, objectives, and strategies to develop South Sudan’s agricultural sector to improve food security and contribute to economic growth and environmental sustainability, and to facilitate and encourage the equitable and sustainable development of improved livelihoods. It exercises its role through the Directorate of Research and Training and the Directorate of Agriculture and Extension services.
Ministry of Water Resources and Irrigation	Responsible for managing water resources and developing water policies, strategies, and plans, such as the Irrigation Development Master Plan and the Water Resources Utilisation and Development Master Plan.
Ministry of Humanitarian and Disaster Management (MHDM)	Responsible for policy decision-making on disaster risk reduction at the national level. Its mandate is to oversee all humanitarian work in South Sudan. It is composed of the Directorate of Administration and Finance; the Directorate of Planning, Coordination, Monitoring and Evaluation; and the Directorate of Disaster and Management.
South Sudan Relief and Rehabilitation Commission (SSRRC)	This is the operational arm of the MHDM, responsible for implementing policies made by the Ministry under the Directorate of Disaster Management at the national level and through SSRRC’s representatives at the levels of states and counties. It is involved in establishing an early warning system at national and state levels.
South Sudan Forestry Commission	Has been proposed by the policy on forestry to administer, regulate and supervise forestry activities in South Sudan.
South Sudan Food Security Council	Has been proposed by the policy on food security to implement, monitor and evaluate the implementation of the food security policy.

4.4 International Environmental and Social Management Requirements

Government of South Sudan is a signatory to several international treaties and conventions and guidelines that are relevant to this project as described below.

Table 4-3: International Treaties and Conventions and Guidelines

Biological Diversity Convention.	The Convention on Biological Diversity has three goals. These are: the conservation of biodiversity; the sustainable use of the components of biodiversity; and the fair and equitable sharing of the benefits arising from the use of genetic resources.
United Nations Convention to Combat Desertification (UNCCD)	The objective of the Convention is to combat desertification and mitigate the effects of droughts in countries experiencing serious drought and/or desertification, particularly in Africa.
United Nations Framework on Climate Change	This convention takes into account the fact that climate change has transboundary impacts. The basic objective of this convention is to provide for agreed limits on the release of greenhouse gases into the atmosphere so as to prevent the occurrence of climate change. It also aims to prepare countries to minimize the impact of climate change should it occur.
Convention on international Trade in Endangered Species of Wild Fauna and Flora (CITES)	CITES is concerned with the overexploitation of many vulnerable species as a result of unregulated international trade. CITES regulates international trade in over 36,000 species of plants and animals, including their products and derivatives, ensuring their survival in the wild with benefits for the livelihoods of local people and the global environment.
Ramsar Convention	The Convention’s mission is “the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world”
Convention on migratory species (CMS)	CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats. It aims to facilitate close cooperation on the conservation of migratory species between the countries through which these animals travel on their annual journeys.
Kyoto Protocol to the Framework Convention on Climate Change, 1997	It sets binding reduction targets for 39 industrialized countries and the European Union for four greenhouse gases (carbon dioxide, methane, nitrous oxide and sulphur hexafluoride); requires other countries to commit to reducing emissions by an average of 5% of their 1990 baseline levels over a five-year period.
UN Convention concerning the prohibition and immediate action for the elimination of the worst forms of child labor	It prohibits and eliminates the worst forms of child labor, including all forms of slavery or practices similar to slavery, commercial sexual exploitation of children, and the use or procurement of a child by others for illegal activities such as for trafficking or production of drugs.

Universal Declaration of Human Rights, 1948	It promotes human rights, social progress, better standards of life, and larger freedom for all people.
UN convention concerning forced or compulsory labour	<i>It eliminates</i> all forms of forced or compulsory labor by requiring parties to commit to taking measures to abolish forced or compulsory labor.
International convention on the elimination of all forms of racial discrimination	<i>It promotes</i> the elimination of all forms of racial discrimination and encourages understanding among all races.
Convention on the elimination of all forms of discrimination against women	It commits parties to end discrimination against women by incorporating gender equality into domestic legislation, repealing all discriminatory provisions in laws, and enacting new provisions to guard against discrimination against women.
African Charter on Human and People's rights	It promotes and protects human rights and basic freedoms in the African continent.
ILO Declaration on fundamental principles and rights at work	It commits parties to respect and promote principles and rights including freedom of association and recognition of the right to collective bargaining, elimination of all forms of forced or compulsory labor, abolition of child labor, and elimination of discrimination in respect of employment and occupation

5 APPLICABLE WORLD BANK ENVIRONMENTAL & SOCIAL STANDARDS

This chapter describes the World Bank Environmental and Social Standards (ESS) that are applicable to this project. **Table 5-1** below shows the Banks Environmental and Social Standards that are applicable as a result of the proposed project.

5.1 Applicable World Bank’s Environmental and Social Standards

The ACTED program targeting Yambio, Ibba and Maridi Counties in Western Equatoria region and expected to have project investments in certain areas in the region for as long as the selected sites are feasible. However, the likely or potential locations of many of the proposed investments are unknown at this point in time. In order to reduce, minimise and mitigate adverse risks and impacts and undue harm of its development projects to the environment, all Bank-financed projects are guided by applicable environmental and social standards (ESS) under the Environmental and Social Framework (ESF).

Table 5-1. Relevant Environmental and Social Standards

ESS	Rationale
Assessment and Management of Environmental and Social Risks and Impacts. (ESS1)	<p>During implementation of the micro-projects and multi-community investments, these activities are likely to result to potential negative environmental risks and impacts that include soil and water pollution, dust emissions, community health and safety risks and Occupational, Health and Safety (OHS) risks, generation of hazardous and non-hazardous waste.</p> <p>These impacts are expected to be temporary, site specific, reversible, and easy to mitigate. The potential negative environmental risks and impacts associated with minor construction activities include: (i) Air pollution, (ii) Soil and water pollution; (iii) Community health and safety; (iv) OHS; and (v) Generation of hazardous and non-hazardous waste. These impacts are expected to be temporary, site specific, predictable, reversible, and easy to mitigate. Other impacts include the solid waste generation from the spoilt farm produce.</p> <p>The negative social impacts that could arise from the construction activities are: (i) Conflict among communities due to site selection of location of investments; (ii) Inadequate consultations with the local populations due to the vastness of the areas being targeted by the project; (iii) Community health and safety; (vi) Gender Based Violence ;(vii) Labour conflicts; and (viii) Child labor.</p> <p>The ESMF will set out the principles, rules, guidelines and procedures for assessing the environmental and social risks and impacts associated with the project.</p> <p>It will also specify measures and plans to reduce, mitigate and/or offset adverse risks and impacts, outline provisions for estimating and budgeting the costs of such measures, and provide information on the agencies responsible for addressing project risks and impacts, including on their capacity to manage environmental and social risks and impacts. Further, the ESMF specifies information on areas where the individual</p>

	<p>subprojects/investments are to be sited, including any potential environmental and social vulnerabilities of the areas, and the potential impacts that may occur and mitigation measures that might be expected to be used. These environmental and social risk management tools will be prepared and disclosed. During project implementation sub-project site specific Environmental and Social Impact Assessments (ESIA) and RAPs as required in the event of any economic displacement or land acquisition will be prepared by ACTED.</p>
Labor and Working Conditions (ESS2)	<p>The project will involve the use of workers in the construction of works. The ESMF will address 1) Process to document voluntary participation; 2) Working conditions particularly OSHA. The LMP, which will apply to all project workers, will specify the use and flow of different cadres of workers, before the commencement of project activities. During Implementation of project activities, the respective contractors will prepare Occupational Health and Safety (OHS) plans and the Community Health Management Plans (CHMPS) as part of their contractor specific ESMFs to manage related risks.</p> <p>Moreover, all consultants and contracted workers will sign a code of conduct (CoC) in relevant languages, acceptable to the Bank, to mitigate the risk of GBV/SEA or misconduct in the workplace and in contact with community members.</p> <p>They will also ensure that national labor-related laws are upheld, such as public service act, labor law, public health provisions, and public service human resource policy, etc. and institutional roles related to enforcement of the laws, and recruitment, discipline, appraisals, and dismissals. A redress mechanism for work related grievances will be provided to project staff and consultants, with necessary considerations for confidentiality and whistle-blower protection.</p> <p>There will be specific provisions on the prevention of spread and management of COVID-19 at the work sites and during interactions with the communities during consultation sessions based on the guidance and protocols provided by the Ministry of Health (MoH) and the World Health Organization (WHO).</p>
Resource Efficiency and Pollution Prevention and Management (ESS3)	<p>During implementation, the results of environmental and social risk screening of proposed sub-projects activities will advise on whether there are anticipated risks related to water (e.g., potential for high water demand), raw materials and energy use; and how risks of air pollution and waste generation will be handled.</p>
Community Health and Safety (ESS4)	<p>There are additional risks of GBV/SEA that may extend to communities being served by the project. The project monitoring activities will also focus on the community health and safety issues and address any emerging challenges during the implementation.</p>
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement (ESS5)	<p>A Resettlement Policy Framework (RPF) has been prepared and provides guidance on 1) Screening process; 2) If land is to be donated or voluntary sold, the process and transaction fulfil the requirements of ESS5 and are well documented. The RPF also provides guidelines to address livelihood interruption impacts and preparation RAPs as required in the event of any economic displacement or land acquisition.</p>
Biodiversity Conservation and Sustainable	<p>Relevance of this ESS will be further assessed during project preparation and as part of the ESIA process. However, it is expected that the project will not support sub-projects that are located in sensitive ecological areas</p>

Management of Living Natural Resources (ESS 6)	and or protected areas. This ESMF has an environmental and social screening tool that will be used for screening the proposed subprojects and will ensure that no sub-project is sited in an ecologically fragile and or protected area. Since no subproject will be located in areas of ecologically sensitive or protected areas, risks related to sustainable management of living natural resources and primary supply of natural resource commodities are not anticipated.
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities (ESS7)	<u>Not Applicable</u>
Cultural Heritage (ESS8)	Construction works have been proposed under the project. Thus, there is the potential for chance find of cultural or archaeological significance during construction. The ESMF covers the risks associated with intangible cultural heritage (such as disruption to religious/cultural festivity in the community by civil work). It provides that adequate measures will be carried out including meaningful consultations with the relevant stakeholders and documentation and protection of the identified intangible cultural heritage. Subproject specific ESMPs will address these issues through the inclusion of chance find procedures and site-specific mitigation measures.
Stakeholder Engagement and Information Disclosure (ESS 10)	A key risk under this standard, relates to potential inadequate, ineffective, insufficiently inclusive, and inappropriate stakeholder and community engagements and disclosure of information leading to exclusion of truly vulnerable, marginalized and minority members of the community from expressing their views and concerns relating to the project and to their exclusion from sharing in project benefits, amplified by the context of limited resources against widespread need. Others include elite capture where project benefits are diverted to less-needy individuals and locations and poor access to beneficiaries for meaningful community engagements and difficulty in monitoring for social harm.

5.1.1 World Bank's Assessment and Management of Environmental and Social Risks and Impacts

The Bank will classify all projects (including projects involving Financial Intermediaries (FIs)) into one of four classifications: High Risk, Substantial Risk, Moderate Risk or Low Risk. In determining the appropriate risk classification, the Bank will take into account relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the Borrower (including any other entity responsible for the implementation of the project) to manage the environmental and social risks and impacts in a manner consistent with the ESSs. Other areas of risk may also be relevant to the delivery of environmental and social mitigation measures and outcomes, depending on the specific project and the context in which it is being developed.

5.2 Environmental and Social Risks Classification

5.2.1 Environmental Risk Classification

The project will potentially impact local populations dependent on natural resources for their livelihoods such as pasture, vegetation and as such the project environmental risk is considered **Substantial**.

5.2.2 Social Risk Classification

The principle social risks associated with the project include: - labour influx associated with these control measures is a primary risk, as it may impact upon the community through sexual exploitation and abuse of vulnerable women and girls or spreading of communicable diseases (including HIV/STDs) to otherwise isolated rural communities with limited access to health services.

Table 5-2. Gap Analysis of Environmental and Social Standards and GOSS National Laws

ESS and Requirements	National Laws and Requirements	Gaps
<p><u>Social and Environmental Assessment and Management System (ESS1)</u></p> <p><i>Use of Borrower’s Environmental and Social Framework</i> When a project is proposed for Bank support, the Borrower and the Bank will consider whether to use all, or part, of the Borrower’s ES Framework in the assessment, development, and implementation of a project. Such use may be proposed provided this is likely to address the risks and impacts of the project and enable the project to achieve objectives materially consistent with the ESSs.</p> <p><i>Environmental and Social Assessment</i> The Borrower will carry out an environmental and social assessment of the project to assess the environmental and social risks and impacts of the project throughout the project life cycle. The assessment will be proportionate to the potential risks and impacts of the project, and will assess, in an integrated way, all relevant direct, indirect, and cumulative environmental and social risks and impacts throughout the project life cycle, including those specifically identified in ESSs2–10.</p> <p><i>Environmental and Social Commitment Plan</i> The Borrower will develop and implement an ESCP, which will set out measures and actions required for the project to achieve compliance with the ESSs over a specified time frame. The ESCP will be agreed upon with the Bank and will form part of the legal agreement. The draft ESCP will be disclosed as early as possible, and before project appraisal.</p> <p><i>Project Monitoring and Reporting</i> The Borrower will monitor the environmental and social performance of the project in accordance with the legal</p>	<p><i>Use of Borrower’s Environmental and Social Framework</i></p> <p><u>Environmental Protection Bill 2010</u> This law is intended to coordinate all matters relating to the environment and to be the principal instrument of government in the implementation of all policies relating to the environment. Among other things, it provides for the preparation of a National Environmental Action Plan; and designation of Environmentally Sensitive Areas (ESAs) for the actual or prospective habitat of any environmentally sensitive species required to be protected for the purpose of meeting the government’s international obligations under any of the MEAs. Section 18 of the Bill introduces the requirement for Environmental Impact Assessment (EIA) while environmental audits are dealt with under Section 19. The Bill further provides for freedom to access environmental information and addresses pollution prevention, control, and waste management.</p> <p><i>Project Monitoring and Reporting</i> The Environmental Protection Bill provides for EIA studies including as part of ESMP clear procedures to monitor and measure the effectiveness of the management program, as well as compliance</p>	<p>Gaps between ESS 1 and the national laws.</p> <p>Significant gaps between ESS 1 and the national laws.</p> <p>Use ESS 1.</p>

ESS and Requirements	National Laws and Requirements	Gaps
<p>agreement (including the ESCP). The extent and mode of monitoring will be agreed upon with the Bank and will be proportionate to the nature of the project, the project’s environmental and social risks and impacts, and compliance requirements. The Borrower will ensure that adequate institutional arrangements, systems, resources, and personnel are in place to carry out monitoring. Where appropriate and as set out in the ESCP, the Borrower will engage stakeholders and third parties, such as independent experts, local communities, or nongovernmental organizations (NGOs), to complement or verify its own monitoring activities. Where other agencies or third parties are responsible for managing specific risks and impacts and implementing mitigation measures, the Borrower will collaborate with such agencies and third parties to establish and monitor such mitigation measures.</p> <p>Stakeholder Engagement and Information Disclosure As set out in ESS10, the Borrower will continue to engage with, and provide sufficient information to stakeholders throughout the life cycle of the project, in a manner appropriate to the nature of their interests and the potential environmental and social risks and impacts of the project.</p>	<p>with any related legal and/or contractual obligations and regulatory requirements.</p> <p>Stakeholder Engagement and Information Disclosure The Environmental Protection Bill provides for ESIA studies to include stakeholder engagement and disclosure of information.</p>	
<p>Labour and Working Conditions (ESS2) recognises that the pursuit of economic growth through employment creation and income generation should be balanced with protection for basic rights of workers.</p> <ul style="list-style-type: none"> • ESS2 provides specific requirements on occupation health and safety, expanding upon the World Bank Group’s Environmental, Health and Safety Guidelines. • It introduces labor management procedures. • It requires non-discrimination and equal opportunity. • ESS2 includes provisions on the treatment of direct, contracted, community, and primary supply workers, and government civil servants. 	<p>Working Conditions and Management of Workers Relationship GOSS’s employment and labour laws workers are guided by clear labor management procedures and informed by international conventions.</p>	<p>Gaps between ESS 2 and the national laws.</p> <p>Significant gaps between ESS 2 and the national laws.</p> <p>Use ESS 2.</p>

ESS and Requirements	National Laws and Requirements	Gaps
<ul style="list-style-type: none"> • ESS2 recognizes workers’ organizations. It requires a grievance mechanism for all project workers. • ESS2 includes protection of project workers, including vulnerable workers, such as women, and persons with disabilities. • Prevents the use of all forms of forced labor and child labor <p><i>Working Conditions and Management of Workers Relationship</i> The Borrower will develop and implement written labor management procedures applicable to the project. These procedures will set out the way in which project workers will be managed, in accordance with the requirements of national law and this ESS.9. The procedures address the way in which this ESS will apply to different categories of project workers, including direct workers, and the way in which the Borrower will require third parties to manage their workers.</p> <p><i>Non-Discrimination and Equal Opportunity</i> Decisions relating to the employment or treatment of project workers will not be made on the basis of personal characteristics unrelated to inherent job requirements. The employment of project workers will be based on the principle of equal opportunity and fair treatment, and there will be no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, or disciplinary practices. The labor management procedures will set out measures to prevent and address harassment, intimidation, and/or exploitation. Where national law is inconsistent with this requirement, the project will seek to carry out project</p>	<p><i>Workers Organisation</i> GOSS’s employment and labour laws provide for grievance redress mechanism establishment in all workplaces through freedom to join associations or trade unions and enter into collective bargaining agreements.</p>	

ESS and Requirements	National Laws and Requirements	Gaps
<p>activities in a manner that is consistent with the requirements to the extent possible. The borrower will take measures to prevent and address harassment, intimidation, and/or exploitation, especially in regard to women. The principles of non-discrimination apply to migrant workers.</p> <p>Workers Organisation In countries where national law recognizes workers’ rights to form and to join workers’ organizations of their choosing and to bargain collectively without interference, the project will be implemented in accordance with national law. In such circumstances, the role of legally established workers’ organizations and legitimate workers’ representatives will be respected, and they will be provided with information needed for meaningful negotiation in a timely manner. Where national law restricts workers’ organizations, the project will not restrict project workers from developing alternative mechanisms to express their grievances and protect their rights regarding working conditions and terms of employment. The Borrower should not seek to influence or control these alternative mechanisms. The Borrower will not discriminate or retaliate against project workers who participate, or seek to participate, in such workers’ organizations and collective bargaining or alternative mechanisms.</p> <p>The borrower will provide a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns and inform the workers of the grievance mechanism at the time of recruitment and make it easily accessible to them.</p> <p>Protecting the Work Force Child Labour and Minimum Age A child under the minimum age will not be employed or engaged in connection with the project. The labor management</p>	<p>Child Labour and Minimum Age Employment Act, 2007 defines a “child” to mean a person who has not attained the age of eighteen years</p> <p>Forced Labor Any form of forced labour, including trafficking, is prohibited by the labour laws.</p> <p>Grievance Mechanism <i>GOSS’s</i> employment and labour laws provide for all workers the freedom and to right to join associations and trade unions where they can air their grievances without fear of victimisation.</p> <p>Contracted Workers <i>GOSS’s</i> employment and labour laws provide for protection of the rights of all categories of workers, including contracted workers.</p>	

ESS and Requirements	National Laws and Requirements	Gaps
<p>procedures will specify the minimum age for employment or engagement in connection with the project, which will be the age of 14 unless national law specifies a higher age.</p> <p>Forced Labor The borrower will not employ forced labor, which consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. This covers any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. The borrower will not employ trafficked persons.</p> <p>Grievance Mechanisms A grievance mechanism will be provided for all direct workers and contracted workers (and, where relevant, their organizations) to raise workplace concerns. Such workers will be informed of the grievance mechanism at the time of recruitment and the measures put in place to protect them against reprisal for its use. Measures will be put in place to make the grievance mechanism easily accessible to all such project workers.</p> <p>Occupational Health and Safety The borrower to provide a safe and healthy work environment taking into account inherent risks in its particular sector and specific classes of hazards in the work areas. Measures relating to occupational health and safety will be applied to the project. The OHS measures will take into account the General Environmental Health and Safety Guidelines (EHSGs) and, as appropriate, the industry specific EHSGs and other Good International Industry Practice (GIIP). The OHS measures</p>		

ESS and Requirements	National Laws and Requirements	Gaps
<p>applying to the project will be set out in the legal agreement and the Environmental and Social Commitment Plan (ESCP).</p> <p>Contracted Workers The Borrower will make reasonable efforts to ascertain that third parties who engage contracted workers are legitimate and reliable entities and have in place labor management procedures applicable to the project that will allow them to operate in accordance with the requirements of this ESS.</p> <p>Community Workers Projects may include the use of community workers in a number of different circumstances, including where labor is provided by the community as a contribution to the project, or where projects are designed and conducted for the purpose of fostering community-driven development, providing a social safety net or providing targeted assistance in fragile and conflict-affected situations. Given the nature and objectives of such projects, the application of all requirements of ESS2 may not be appropriate. In all such circumstances, the Borrower will require measures to be implemented to ascertain whether such labor is or will be provided on a voluntary basis as an outcome of individual or community agreement.</p> <p>Primary Supply Workers As part of the environmental and social assessment, the Borrower will identify potential risks of child labor, forced labor, and serious safety issues which may arise in relation to primary suppliers.</p>		
<p><u>Resource Efficiency and Pollution Prevention and Management (ESS3)</u> recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people,</p>	<p>Government of Republic of South Sudan has a no legal and regulatory statutes that address and enforce Pollution Prevention and Management including (Air, Water, Hazardous and Non-Hazardous Waste, Chemical and Hazardous Materials.).</p>	<p>Gaps between ESS 3 and the national laws.</p>

ESS and Requirements	National Laws and Requirements	Gaps
<p>ecosystem services, and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations. At the same time, more efficient and effective resource use, pollution prevention, and GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable.</p> <p>The Borrower will consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention measures in accordance with the mitigation hierarchy. The measures will be proportionate to the risks and impacts associated with the project and consistent with GIIP, in the first instance the Environmental Health and Safety Guidelines (EHSs).</p> <ul style="list-style-type: none"> • Include requirement on management of wastes, chemical and hazardous materials. • Provides for avoidance or minimization and/generation of hazardous and non-hazardous waste • Minimize and manage the risks and impacts associated with pesticide use • Provides for measures to avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities. • Provides for measures to promote more sustainable use of resources, including energy and water. • Requires that project that involving significant pest management issues, the Project will prepare IPMP • Requires not to use any pesticides products that contain active ingredients that are restricted under applicable international conventions or protocols • Provides for measures to reduce project related GHG 		<p>Significant gaps between ESS 3 and the national laws.</p> <p>Use ESS 3.</p>

ESS and Requirements	National Laws and Requirements	Gaps
<p>emissions.</p> <p><i>Pollution Prevention and Management</i> The Borrower will avoid the release of pollutants or, when avoidance is not feasible, minimize and control the concentration and mass flow of their release using the performance levels and measures specified in national law or the EHSs, whichever is most stringent. This applies to the release of pollutants to air, water, and land due to routine, nonroutine, and accidental circumstances, and with the potential for local, regional, and transboundary impacts.</p> <p><i>Air Pollution Management</i> In addition to the resource efficiency measures described above, the Borrower will consider alternatives and implement technically and financially feasible and cost-effective¹¹ options¹² to avoid or minimize project-related air emissions during the design, construction, and operation of the project.</p> <p><i>Management of Hazardous and Non-hazardous Waste.</i> The Borrower will avoid the generation of hazardous and non-hazardous waste. Where waste generation cannot be avoided, the Borrower will minimize the generation of waste, and reuse, recycle and recover waste in a manner that is safe for human health and the environment. Where waste cannot be reused, recycled or recovered, the Borrower will treat, destroy, or dispose of it in an environmentally sound and safe manner that includes the appropriate control of emissions and residues resulting from the handling and processing of the waste material.</p> <p><i>Management of Chemicals and Hazardous Materials</i> The Borrower will avoid the manufacture, trade, and use of chemicals and hazardous materials subject to international bans, restrictions or phaseouts unless for an acceptable purpose</p>		

ESS and Requirements	National Laws and Requirements	Gaps
<p>as defined by the conventions or protocols or if an exemption has been obtained by the Borrower, consistent with Borrower government commitments under the applicable international agreements.</p>		
<p><u>Community Health and Safety (ESS4)</u> recognises that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities.</p> <p>ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.</p> <p>ESS 4 Objectives include:</p> <ul style="list-style-type: none"> • To anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and nonroutine circumstances. • To promote quality and safety, and considerations relating to climate change in the design and construction of infrastructure, including dams. • To avoid or minimize community exposure to project-related traffic and road safety risks, diseases, and hazardous materials. • To have in place effective measures to address emergency events. • To ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities. 	<p>GoRSS has a number of legal and regulatory statutes that address community health and safety, hazard material management and safety, safety services, traffic and road safety, ecosystem services, community exposure to diseases, emergency preparedness and security personnel.</p> <p><u>The Public Health Act</u></p> <ul style="list-style-type: none"> • Provides for the prevention of the occurrence of nuisance or conditions dangerous/injurious to humans. • Provides that the relevant local authority shall take all lawful, necessary and reasonably practicable measures. <p><u>Environmental Protection Bill.</u> Provides for protection and conservation of the environment, environmental impact assessment, and environmental auditing and monitoring.</p> <p><u>Traffic and Road Safety</u> Traffic Act which ensures the implementation of all traffic rules and regulations including protecting communities from road safety hazards and risks.</p>	<p>Gaps between ESS 4 and the national laws.</p> <p>Significant gaps between ESS 4 and the national laws.</p> <p>Use ESS 4.</p>

ESS and Requirements	National Laws and Requirements	Gaps
<p><i>Community Health and Safety</i> The Borrower will evaluate the risks and impacts of the project on the health and safety of the affected communities during the project life cycle, including those who, because of their particular circumstances, may be vulnerable. The Borrower will identify risks and impacts and propose mitigation measures in accordance with the mitigation hierarchy.</p> <p><i>Infrastructure, Equipment Design and Safety</i> The Borrower will design, construct, operate, and decommission the structural elements of the project in accordance with national legal requirements, the EHSs and other GIIP, taking into consideration safety risks to third parties and affected communities. Structural elements of a project will be designed and constructed by competent professionals and certified or approved by competent authorities or professionals. Structural design will take into account climate change considerations, as appropriate.</p> <p><i>Hazardous Materials Management and Safety</i> The borrower will avoid or minimize the potential for community exposure to hazardous materials and substances that may be released by the project.</p> <p><i>Safety of Services</i> Where the project involves provision of services to communities, the Borrower will establish and implement appropriate quality management systems to anticipate and minimize risks and impacts that such services may have on community health and safety. In such circumstances, the Borrower will also apply the concept of universal access, where technically and financially feasible.</p> <p><i>Traffic and Road Safety</i></p>	<p><i>Community Exposure to Disease</i> <u>The Public Health Act</u></p> <ul style="list-style-type: none"> • Provides that the relevant local authority shall take all lawful, necessary, and reasonably practicable measures. • Provides for the prevention of the occurrence of nuisance or conditions dangerous/injurious to humans. 	

ESS and Requirements	National Laws and Requirements	Gaps
<p>The Borrower will identify, evaluate, and monitor the potential traffic and road safety risks to workers, affected communities, and road users throughout the project life cycle and, where appropriate, will develop measures and plans to address them. The Borrower will incorporate technically and financially feasible road safety measures into the project design to prevent and mitigate potential road safety risks to road users and affected communities.</p> <p><i>Ecosystem Services</i> The project’s direct impacts on ecosystem services may result in adverse health and safety risks to and impacts on affected communities. With respect to this ESS, ecosystem services are limited to provisioning and regulating services as defined in ESS1. Where appropriate and feasible, the Borrower will identify the project’s potential risks and impacts on ecosystem services that may be exacerbated by climate change. Adverse impacts will be avoided, and if they are unavoidable, the Borrower will implement appropriate mitigation measures.</p> <p><i>Community Exposure to Disease</i> The Borrower will avoid or minimize the potential for community exposure to waterborne, water based, water-related, and vector-borne diseases, and communicable and non-communicable diseases that could result from project activities, taking into consideration differentiated exposure to and higher sensitivity of vulnerable groups. Where specific diseases⁵ are endemic in communities in the project area, the Borrower is encouraged to explore opportunities during the project life cycle to improve environmental conditions that could help minimize their incidence.</p> <p><i>Emergency Preparedness and Response</i> The Borrower will identify and implement measures to address emergency events. An emergency event is an unanticipated</p>		

ESS and Requirements	National Laws and Requirements	Gaps
<p>incident, arising from both natural and man-made hazards, typically in the form of fire, explosions, leaks, or spills, which may occur for a variety of different reasons, including failure to implement operating procedures that are designed to prevent their occurrence, extreme weather, or lack of early warning. The measures will be designed to address the emergency event in a coordinated and expeditious manner; to prevent it from injuring the health and safety of the community; and to minimize, mitigate, and compensate for any impacts that may occur.</p> <p><i>Security Personnel</i></p> <p>When the Borrower retains direct or contracted workers to provide security to safeguard its personnel and property, it will assess risks posed by these security arrangements to those within and outside the project site. In making such arrangements, the Borrower will be guided by the principles of proportionality and GIIP, and by applicable law in relation to hiring, rules of conduct, training, equipping, and monitoring of such security workers. The Borrower will not sanction any use of force by direct or contracted workers in providing security except when used for preventive and defensive purposes in proportion to the nature and extent of the threat. The Borrower will (i) make reasonable inquiries to verify that the direct or contracted workers retained by the Borrower to provide security are not implicated in past abuses; (ii) train them adequately (or determine that they are properly trained) in the use of force (and where applicable, firearms) and appropriate conduct toward workers and affected communities; and (iii) require them to act within the applicable law and any requirements set out in the Environmental and Social Commitment (ESCP).</p>		
<p><u>Biodiversity Conservation and Sustainable Management of Living Natural Resource (ESS6)</u> recognises protecting</p>	<p><u>The Wildlife Conservation and National Parks Protection Act, 2003</u></p> <ul style="list-style-type: none"> • Prohibits pollution of wildlife habitats and ecosystems. 	<p>Gaps between ESS 6 and the national laws.</p>

ESS and Requirements	National Laws and Requirements	Gaps
<p>and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development.</p> <p>ESS6 recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support. Habitat is defined as a terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the non-living environment. All habitats support complexities of living organisms and vary in terms of species diversity, abundance, and importance.</p> <p>ESS 6 also addresses sustainable management of primary production² and harvesting of living natural resources.</p> <p>ESS6 recognizes the need to consider the livelihood of project-affected parties, including Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, whose access to, or use of, biodiversity or living natural resources may be affected by a project. The potential, positive role of project-affected parties, including Indigenous Peoples, in biodiversity conservation and sustainable management of living natural resources is also considered.</p> <p><u>Objectives</u></p> <ul style="list-style-type: none"> • To protect and conserve biodiversity and habitats. • To apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity. • To promote the sustainable management of living natural resources. • To support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities. 	<p><u>The Forest Commission Act, 2003</u></p> <ul style="list-style-type: none"> • Prohibits the destruction of protected tree species or family of trees • Provides for the sustainable management of forests and woodlands 	<p>Significant gaps between ESS 6 and the national laws.</p> <p>Use ESS 6.</p>

ESS and Requirements	National Laws and Requirements	Gaps
<p>Requirements</p> <p><u><i>General</i></u></p> <p>The environmental and social assessment as set out in ESS1 will consider direct, indirect, and cumulative project-related impacts on habitats and the biodiversity they support. This assessment will consider threats to biodiversity, for example, habitat loss, degradation and fragmentation, invasive alien species, overexploitation, hydrological changes, nutrient loading, pollution and incidental take, as well as projected climate change impacts. It will determine the significance of biodiversity or habitats based on their vulnerability and irreplaceability at a global, regional, or national level and will also take into account the differing values attached to biodiversity and habitats by project-affected parties and other interested parties.</p> <p><u><i>Assessment of Risks and Impacts</i></u></p> <p>Through the environmental and social assessment, the Borrower will identify the potential project related risks to and impacts on habitats and the biodiversity that they support. In accordance with the mitigation hierarchy, the Borrower will make the initial assessment of project risks and impacts without taking into account the possibility of biodiversity offsets. The assessment undertaken by the Borrower will include identification of the types of habitats potentially affected and consideration of potential risks to and impacts on the ecological function of the habitats. The assessment will encompass any areas of potential biodiversity importance that may be affected by the project, whether or not they are protected under national law. The extent of the assessment will be proportionate to the risks and impacts, based on their likelihood, significance, and severity, and will reflect the concerns of project affected parties and other interested parties.</p>		

ESS and Requirements	National Laws and Requirements	Gaps
<p>Primary Suppliers</p> <p>Where a Borrower is purchasing natural resource commodities, including food, timber, and fiber, that are known to originate from areas where there is a risk of significant conversion or significant degradation of natural or critical habitats, the Borrower’s environmental and social assessment will include an evaluation of the systems and verification practices used by the primary suppliers.</p>		
<p>Stakeholder Engagement and Information Disclosure. (ESS 10).</p> <p>This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.</p> <p>Objectives</p> <ul style="list-style-type: none"> • To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties. • To assess the level of stakeholder interest and support for the project and to enable stakeholders’ views to be taken into account in project design and environmental and social performance. • To promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle on issues that could potentially affect them. • To ensure that appropriate project information on environmental and social risks and impacts is 		<p>Significant gaps between ESS 10 and the various national laws.</p> <p>Use ESS 10.</p>

ESS and Requirements	National Laws and Requirements	Gaps
<p>disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format.</p> <ul style="list-style-type: none"> To provide project-affected parties with accessible and inclusive means to raise issues and grievances and allow Borrowers to respond to and manage such grievances. <p>Engagement during Project Preparation Stakeholder Identification and Analysis The Borrower will identify the different stakeholders, both project-affected parties and other interested parties. As set out in paragraph 5, individuals or groups that are affected or likely to be affected by the project will be identified as ‘project-affected parties’ and other individuals or groups that may have an interest in the project will be identified as ‘other interested parties’.</p> <p>Stakeholder Engagement Plan In consultation with the Bank, the Borrower will develop and implement a Stakeholder Engagement Plan (SEP) proportionate to the nature and scale of the project and its potential risks and impacts. A draft of the SEP will be disclosed as early as possible, and before project appraisal, and the Borrower will seek the views of stakeholders on the SEP, including on the identification of stakeholders and the proposals for future engagement. If significant changes are made to the SEP, the Borrower will disclose the updated SEP.</p> <p>Information Disclosure The Borrower will disclose project information to allow stakeholders to understand the risks and impacts of the project, and potential opportunities. The Borrower will provide stakeholders with access to the following information as early as possible before the Bank proceeds to project appraisal, and</p>		

ESS and Requirements	National Laws and Requirements	Gaps
<p>in a time frame that enables meaningful consultations with stakeholders on project design.</p> <p><i>Meaningful Consultation</i> The Borrower will undertake a process of meaningful consultation in a manner that provides stakeholders with opportunities to express their views on project risks, impacts, and mitigation measures, and allows the Borrower to consider and respond to them. Meaningful consultation will be carried out on an ongoing basis as the nature of issues, impacts, and opportunities evolves</p> <p><i>Engagement during Project Implementation and External Reporting</i> The Borrower will continue to engage with, and provide information to, project-affected parties and other interested parties throughout the life cycle of the project, in a manner appropriate to the nature of their interests and the potential environmental and social risks and impacts of the project.</p> <p><i>Grievance Mechanism</i> The Borrower will respond to concerns and grievances of project-affected parties related to the environmental and social performance of the project in a timely manner. For this purpose, the Borrower will propose and implement a grievance mechanism to receive and facilitate resolution of such concerns and grievances.</p> <p><i>Organizational Capacity and Commitment</i> The Borrower will define clear roles, responsibilities, and authority, as well as designate specific personnel to be responsible for the implementation and monitoring of stakeholder engagement activities and compliance with this ESS.</p>		

6 POTENTIAL ENVIRONMENT AND SOCIAL RISKS AND IMPACTS

This chapter highlights the potential environmental and social risks and impacts of the project as well as the mitigation and monitoring measures to manage the risks and impacts.

6.1 Beneficial Impacts

6.1.1 Construction Phase

6.1.1.1 Employment Opportunities

The construction works will require several human resources from equipment operators to other skilled and unskilled labourers. Several workers including casual labourers, plumbers, electricians and engineers and health and safety experts are expected to work on the site for a period of time. Semi-skilled, unskilled, and formal employees are also expected to obtain gainful employment during the period of construction. In addition, the project will offer a source of income to the women through sale of food items to the workers there by enabling them to earn additional source of income to support their families though this is to be a medium positive impact of short-term nature.

6.1.1.2 Market for Supply of Building Materials

The construction of the facilities will require supply of building materials, machinery, and essential services most of which will be sourced locally. This will provide ready market for building contractors who will supply various construction materials.

6.1.1.3 Enhanced Security

A 24-hour security detail will be employed to guard the site. Street lighting and floodlights will be set up and in thus doing, increasing the security. The enhanced security will extend to the neighboring residential communities.

6.1.1.4 Economic Growth

The project will contribute to the growth of the Gross Domestic Product (GDP) through taxes levied on construction materials. The laborers will also have improved livelihoods and will therefore be able to afford services and products on which the government will receive tax returns.

6.1.2 Operation Phase

6.1.2.1 Produce Storage

Farmers will be able to properly store and process their agricultural cereal produce, which will significantly reduce spoilage and wastage and allow a larger quantity of produce to be kept for a longer period. Therefore, more agricultural produce will be available in the local community and markets, which will help reduce food insecurity. Secondly, the improved quantities and quality of cereal produce will make marketing and selling produce easier for farmers and increase profitability of agricultural production, thus incentivizing the farmers to increase their productivity. This will help transition the local community from smallholder and subsistence farming to commercial farming.

The fruit processing facilities will allow the community to take advantage of and profit from an otherwise completely wasted natural resource, in unused fruit during key seasons. Mangoes, pineapples, and lemons are in huge abundance in Maridi and Yambio, and during the seasons the fruit hold almost no value due to their widespread availability to the population. However, due to their abundance and lack of any kind of processing and preservation facilities, most go unused and are completely wasted, as the community has no means of storing or processing them to either consume later or to sell.

6.1.2.2 Improved Road Access

Roads will allow access for rural and productive communities to business, employment opportunities and markets, as well as increasing access for traders and retailers to productive areas to buy local produce. Simply put, producers will have much greater access to markets for their produce. In turn, this will encourage and facilitate increased production and economic participation. Additionally, improved roads will allow these rural IDP and returnee communities to have much better access to basic services, such as health, WASH, education and employment.

6.1.2.3 Access to Water

The construction of communal WASH infrastructure (water sources and storage tanks) is an essential activity that will address the pre-condition of ensuring that communities have access to water for household consumption.

6.2 Adverse Environmental Risks and Impacts

The potential adverse environmental and social risks and impacts of the project highlighted below. These are the adverse risks and impacts likely to be experienced by the project.

6.2.1 Operation Phase

6.2.1.1 Air Pollution

Air pollution during construction include gaseous and dust emissions which may have an impact on air quality. Project activities that have potential to impact air quality include emissions of air pollutants from temporary power generators, construction equipment, and vehicles. The construction activities will entail the use of motorized machinery and vehicles which will lead to air pollution which will impact human health and the environment in general. Pollutants from motorised equipment during construction will include:

Box 1: Expected Air Quality Pollutants

1. CO – Carbon monoxide
2. CO₂ - Carbon dioxide
3. NO_x– Nitrogen oxides including NO₂ - nitrogen dioxide and NO–nitric oxide.
4. PM₁₀ – fine particulate matter including soot/black; and
5. Sulphur dioxide (SO₂): SO₂ is of concern because of its impacts on health and vegetation.
6. Dust is defined as all particulate matter up to 75µm in diameter and comprising both suspended and deposited dust, whereas PM₁₀ is a mass fraction of airborne particles of diameter 10µm or less. Dust and PM₁₀ emissions arise from a number of sources, so

both construction activities and emissions from vehicles associated with the construction site need to be considered

Construction vehicles are generally fueled with diesel, and thus, SO₂, PM, NO_x, VOC, and CO emissions are expected to occur on the site. In addition to these mobile source emissions, there will be also stationary emissions from the activities in the sub-station and maybe camp site (if decided upon by contractor). These emissions will be mostly due to power generations in diesel generators if used. Most site equipment (excavators, diggers, etc.) can be considered as similar to medium or heavy-duty trucks. Vehicles are used for the transport of materials and equipment on and off site.

The above pollutants are only likely to be significant where coal or heavy fuel oil are in use. As these fuels will not be used for the Project, significant impacts on air quality from these pollutants are therefore considered unlikely. The above pollutants are of concern due to the adverse effects on human health and natural ecosystems in the local environment.

Construction activities will also create dust in particular where vehicles are using unpaved roads close to properties and agricultural areas. Dust emitted from excavation, earth moving, loading, handling, and transportation of materials. Dust deposition from road traffic is not likely to be a more significant issue than exhaust emissions, the roads used by construction vehicles are paved. The construction has the potential to cause emissions of dust Total Suspended Particles (TSP) from land clearing, earthworks, movement of vehicles over unpaved surfaces and roads, handling of friable materials etc. These sources have the potential to increase ambient concentrations of particulate matter, resulting in nuisance at nearby settlements and to affect crops and natural vegetation through dust deposition.

Table 6-1: WB and WHO reference standards and guidelines for NO_x PM, SO_x.

Parameter	WHO Air Quality Guidelines
Sulphur Dioxide, SO ₂	20 µg/m ³
Nitrogen Oxides, NO _x as NO ₂	200 µg/m ³ (1hr)
Suspended Particulate Matter	200 µg/m ³
PM10	100 µg/m ³
PM2.5	25 µg/m ³
Ozone	100 µg/m ³

Impact Assessment

Exhaust Emissions

No detailed traffic data is available at this stage. However, the numbers of Heavy-Duty Vehicles (HDV) and Light Duty Vehicles (LDVs) are expected to be well below the thresholds for potentially significant impacts. On this basis, the magnitude of impacts associated road traffic exhaust emissions are predicted to be **Negligible**. Combined with the Medium and Low receptor sensitivities identified the overall significance of impacts is Negligible.

Dust and PM10

There is the potential for impacts to arise from:

- Construction traffic on roads
- Earthworks
- Trackout¹

The Project will require earthworks on the site. These works will include stripping vegetation on site, excavations etc. Due to the scale of these activities, the Magnitude is Negligible. The exact number of HDVs that will be generated is unknown. On this basis, the magnitude of trackout is low. Combined with the Medium and Low receptor sensitivities identified the significance of unmitigated impacts are:

- Traffic on unpaved roads are **Minor** where there are receptors within 50m of unpaved roads used by construction traffic, or the haul route;
- Earthworks are **Moderate** where there are receptors within 350m of locations where earthworks are being undertaken, including stripping and excavations.
- Construction activities are **Negligible**; and
- Trackout are **Minor** at receptors within 50m of routes used to access the construction route where these are within 500m of the access point to the route or construction site.

Mitigation Measures

Mitigation measures are split into general considerations for all construction activities, and specific mitigation measures for traffic on unpaved roads, earthworks, and track-out. As general measures for all locations:

Impact Significance:
<ul style="list-style-type: none">• Localised, Low and Short term.
Mitigation:
<ul style="list-style-type: none"><input type="checkbox"/> Use protective clothing like dust masks on construction crew.<input type="checkbox"/> Construction sites and transportation routes (those that are murrum and earth standards) will be water-sprayed on regularly up to three times a day, especially if these sites are near sensitive receptors, such as residential areas or institutions (hospitals, etc.).<input type="checkbox"/> All the vehicles and construction machinery should be operated in compliance with relevant vehicle emission standards and manufacturer's specification to minimize air pollution.<input type="checkbox"/> The contractor shall institute speed limits to avoid over speeding which in turn may generate dust<input type="checkbox"/> Develop a Dust Management Plan;<input type="checkbox"/> Record all dust and air quality complaints, identify cause(s), take appropriate measures;

¹ Track-out or carry-out is dirt, mud or other debris tracked onto a paved road surface or area accessible to the public by a vehicle.

- Undertake monitoring close to dusty activities, noting that this may be daily visual inspections, or passive/active monitoring
- Undertake inspections to ensure compliance with the Dust Management Plan;
- Plan potentially dusty activities so that these are located as far from receptors as feasible;
- Erect solid screens if feasible around stockpiles
- Avoid run off of mud and water and maintain drains in a clean state;
- Remove dusty materials from site as soon as possible if not being re-used. If being re-used, cover;
- Impose speed limits on haul routes and in construction compound to reduce dust generation;
- Minimise drop heights when loading stockpiles or transferring materials; and
- Avoid waste or vegetation burning.

For traffic on unpaved roads:

- Undertake watering to attenuate dust near sensitive receptors. The duration and frequency of this should be set out in the **Dust Management Plan** and will consider water availability and any stakeholder grievances; and

For earthworks:

- Revegetate exposed areas as soon as feasible
- Cover stockpiles if feasible;
- Expose the minimum area required for the works and undertake; and exposure on a staged basis to minimise dust blow.

For trackout:

- Where trackout is onto paved roads, use wet road cleaning methods to remove dirt and mud build up;
- Avoid dry sweeping of large areas; and
- Where feasible, undertake wheel washing and vehicle clean down prior to accessing public roads.

6.2.1.2 Noise Pollution

Potential noise impacts may arise as a result of the construction activities. There will be risks and impact of noise and vibration resulting from the construction equipment and machinery on people. Potential sources of noise and vibration during construction will include clearing and grubbing, excavations, earthmoving, construction traffic etc. Construction activities and equipment are not expected to result in significant levels of vibration. Equipment that might cause high levels of vibration (such as impact piling or vibratory compaction) will not be used. Blasting as a construction activity will not occur. The equipment used in construction will generate minimum noise during construction of and will not adversely affect communities and fauna.

Impact Significance:

- Localised; Low and Short Term

Mitigation:

- Avoid nighttime construction when noise is loudest. Avoid night-time construction using heavy machinery, from 22:00 to 6:00 near residential areas.
- No discretionary use of noisy machinery within 50m of residential areas and near institutions, manual labour can be used at this point.
- Good maintenance and proper operation of construction machinery to minimize noise generation.
- Where possible, ensure non-mechanized construction to reduce the use of machinery

6.2.1.3 Soil Contamination and Erosion

Temporary use of land for construction can, if not properly managed and operated, can lead to impacts on soil quality from adverse events such as compaction and accidental spills of liquid cement (excluding hazardous material spills). Construction activities on soils and storage of construction equipment and materials on soils have the potential to affect soil through spills of hazardous material such as oils, fuel, or other materials (i.e., during fuel loading for machinery operating at the site). The magnitude of these impacts can vary between small to medium depending on the magnitude and duration of the adverse events. In addition, site clearing, and excavation would expose the land to soil erosion process.

Impact Significance:

- Localised; Low and Short Term

Mitigation Measures

- The valuable topsoil containing organic material, nutrients as well as seeds and the soil fauna should be excavated separately and piled in an adequate manner for re-use.
- In cases where it is identified that during construction there is a danger of increased run-off or at the project site, temporary drainage channels or holding ponds can be employed
- After completion of the construction works, restoration of the ground by planting adequate grass cover and planting of trees will be followed, therefore the impact is temporary and reversible.
- As much excavated soil as possible will be re-used on the site as backfill and will be compacted to make it stable.
- All working areas will be stabilized while work is going on to the extent that is feasible.
- All earth disturbed areas will be stabilized after earth movement has ceased at the site.

6.2.1.4 Traffic Impacts

There will be an additional traffic load on the existing road network near the Project site as a result of the activities including transport of construction materials to the Project site, transport of excavation wastes from the site and travel to/from Project site by construction workers and other personnel.

Impact Significance:
<ul style="list-style-type: none"> • Localised; Low and Short Term
Mitigation measures:
<ul style="list-style-type: none"> <input type="checkbox"/> The contractor will provide a Traffic Management Plan to provide safety measures for motorists, including alternative routes, road signs and barriers. <input type="checkbox"/> Provide traffic controllers at junctions at work areas with red and green flags to control the traffic. <input type="checkbox"/> The contractor should provide road signs or notices to indicate ongoing works; <input type="checkbox"/> The contractor should enforce traffic controls to avoid congestion and accidents on roads; <input type="checkbox"/> For the site traffic the contractor has to ensure that they: - <ul style="list-style-type: none"> • Only Park in designated parking areas; • Don't block pedestrian routes; • Don't block traffic routes; • Obey the speed limit

6.2.1.5 Solid and Effluent Wastes Impacts

Construction activities will lead to the generation of solid waste in the form of construction debris, for instance stones, wood, broken glasses, containers, rod of metal and pieces of iron sheets. If not well managed, solid waste becomes a potential breeding ground for vectors and thus causing water borne diseases among others. Additionally, they can cause accidents to the construction workers.

Impact Significance:
<ul style="list-style-type: none"> • Localised; Low and Short Term
Mitigation measures:
<ul style="list-style-type: none"> <input type="checkbox"/> The contractor will provide a Waste Management Plan for management of solid and liquid waste <input type="checkbox"/> The contractor to engage licensed waste operator to dispose wastes <input type="checkbox"/> Contractor to provide litter bins for waste disposal <input type="checkbox"/> Contractor to recycle or re-use certain types of wastes (scrap metal) etc. <input type="checkbox"/> Contractor to provide mobile toilets for workers at the construction site

6.2.1.6 Vegetation Destruction Impacts

The proposed development is prone to alter the nature and distribution of the existing vegetation at the project site. Floral diversity will be lost to give way to the proposed building and landscaping works at the site. During the site visits, the study team established that there were no threatened faunal species on the site or within the site's immediate area of influence. The proposed project area has minimal flora and fauna of unique significance and hence this impact will be low in nature. This shall be managed by restricting site clearing to specific areas, obtaining a site clearing permit from management before site clearing and conducting conservation awareness activities.

Impact Significance:
<ul style="list-style-type: none"> • Localised; Low and Short Term
Mitigation:
<ul style="list-style-type: none"> <input type="checkbox"/> Re-plant the indigenous vegetation as much as possible once work is completed. <input type="checkbox"/> Spare the vegetation that must not necessarily be removed or replace the trees. <input type="checkbox"/> Minimize the amount of destruction caused by machinery by promoting non-mechanized methods of construction. <input type="checkbox"/> Ensure protection of the flora and fauna by proper handling of cement during civil works. <input type="checkbox"/> The Contractor should ensure that the employees on site are aware of the company procedures for dealing with spills and leaks from oil storage tanks e.g., using dispersants or adding biological agents to speed up the oil breakdown for the construction machinery through induction and safety training (the contractor will propose a method of cleanup which will be subject to approval).

6.2.1.7 Water Resources Impacts

Construction activities can have significant effects on the surface water resources along the proposed project route and good environmental management, including control of runoff, sediments, storage of fuels and good practice should be followed. Project activities will interact with water resources in the following ways:

- There will be direct interaction during clearing and construction near to or in surface water bodies.
- There will be indirect interaction in the case of erosion of soils into water bodies.
- There will be direct interaction from the abstraction of water from surface water bodies for construction (e.g., for dust control).
- There will be direct interaction from the discharge of treated domestic wastewater to surface water bodies (in the event camp sites are established).
- In addition, if vegetation and soil clearing are not properly managed, there is the potential for soils to run into water bodies and increased sediment load. This in turn may have a detrimental effect on water quality and affect surface water users.

The potential impacts on ground water may occur as a result of accidental spills from the use of hazardous materials (fuel oil and/or lubricants) as well as construction materials (liquid cement, lime) during construction which may migrate off and also infiltrate into groundwater table causing degradation in the water quality. Spills may also occur from the refueling of equipment during construction. The magnitude of the impacts on groundwater (even in perched conditions) during construction is assessed as small to large depending on the amount of spill and timely response to the incident.

Impact Significance
<ul style="list-style-type: none"> • Localised; Low and Short Term
Mitigation measures:
<ul style="list-style-type: none"> <input type="checkbox"/> The contractor will provide a Waste Management Plan for management of solid and liquid waste

- Contractor to provide litter bins for waste disposal
- Contractor to provide mobile toilets for workers at the construction site

6.2.1.8 Occupational Health and Safety

The construction is likely to attract workers from within the project area and outside of the project area. The total number of work force cannot be estimated at this point and will be provided by the contractor. The total work force is going to be skilled and unskilled and sourced from project locality and outside of locality depending on the skill sets desired.

The workers required by the contractor may include among others: -

- a) Engineers-Skilled Experts (civil, mechanical, electrical) etc.
- b) Supervisors, Inspectors Foreman and Operators –Skilled Experts;
- c) Technicians (inspectorate, welders, masons, steel fixers, drivers etc.)–Skilled Experts; and
- d) Flagmen, diggers, cleaning, security, mixing, watering, help team- Unskilled.

The construction activities will also entail engagement of contractors, sub-contractors and third-party entities which will form part of the supply chain. Workers’ rights including occupational health and safety may be abused hence adverse impact and may include exposure to accidents and injuries, loss of man-hours, labour abuses and to ensure fair treatment, remuneration and working conditions. These issues should be considered not only for those who are directly employed by the proponent but also its contractors (including sub-contractors) and within the supply chain. The Project could potentially lead to workforce-related social and health issues throughout the life cycle of the Project if worker management and rights do not meet GOSS law or international best practice. The potential for occupational health and safety incidents throughout the life cycle of the project is higher during construction phase.

Workers’ rights including occupational health and safety need to be considered to avoid accidents and injuries, loss of man-hours, labour abuses and to ensure fair treatment, remuneration and working conditions. The Project could potentially lead to workforce-related social and health issues throughout the life cycle of the Project if worker management and rights do not meet GOSS law or international best practice.

Workers will be exposed to hazards, accidents, and injuries due to the nature of job they undertake. They will be exposed to potential hazards such as falls from height, collapse of scaffolds, operating construction equipment.

Table 6-2 presents the potentially significant impacts associated with occupational health and safety and worker management during the construction and operation phases. The potential for occupational health and safety incidents throughout the life cycle of the project is higher during construction phase.

Table 6-2: Potential Impacts on Occupational Health and Safety and Worker Management

Construction Phase	Operation Phase
Impacts on workers’ health and safety, in particular from road accidents, slip, and trip and falls hazards during	Impacts on workers’ health and safety in particular during operation from occupational hazards.

<p>construction activities, exposure to chemicals and inconsistent use of PPEs.</p> <p>Impacts on workers' rights from violations of labour laws in particular with respect to enforcement of health and safety measures by the employer such as the use of appropriate PPEs during construction.</p> <p>Similarly, the storage and disposal of hazardous waste and materials generated from the use of materials during the construction may also pose a hazard to the health of the workforce if not handled properly. Equipment and worker transport along the roads may also result in road accidents in the absence of a proper traffic management plan or if traffic safety rules are not enforced.</p>	<p>Impacts on worker's rights from lack of enforcement of health and safety measures by the employer such as the use of appropriate PPEs during operation phase.</p>
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<p>Impact Significance:</p>
<ul style="list-style-type: none"> • Localised; Moderate and Short Term
<p>Mitigation measures:</p>
<ul style="list-style-type: none"> <input type="checkbox"/> Contractor to develop Health and Safety Management Plan <input type="checkbox"/> Provide all workers with appropriate PPE <input type="checkbox"/> Provide training to all workers on use of PPE and equipment <input type="checkbox"/> Client and contractor to develop Human Resources Policy, which will outline worker rights to be included in all contracts including restrictions on working hours in line with applicable ILO standards, compensation including consideration of overtime, holidays etc. <input type="checkbox"/> Pre-employment medical assessments will be put in place as a workforce risk management tool to screen individuals for risk factors that may limit their ability to perform a job safely and effectively. Expected benefits of conducting a pre-employment medical assessment include a safer working environment, reduction in workplace injuries, minimised downtime, matching the capacity of the employee with the role, and overall recruitment cost and risk reduction <input type="checkbox"/> ACTED will ensure that training on health and safety measures is provided to all construction workers prior to starting to work on the Project and that supervisors have adequate experience to deliver on their responsibilities. <input type="checkbox"/> ACTED will implement regular health and safety checks and audits of Workers, contractors and subcontractors and implementing sanctions in case of breaches of national standards and the Project's specific standards. Such audits to include workplace H&S; worker contracts, working hours, pay and conditions; housing and food standards. <input type="checkbox"/> ACTED will develop and implement a Workers Grievance Mechanism for the Project workforce including contractors and subcontractors. <input type="checkbox"/> ACTED will establish a procedure for the recording and analysis of incidents and lessons learned such that additional actions can be implemented to avoid or minimize occupational health and safety risks. <input type="checkbox"/> ACTED will ensure that facilities and work sites are designed and maintained such that robust barriers are in place to prevent accidents.

- ACTED will ensure that WB Group EHS guidelines regarding the construction and management of worker accommodation and the provisions of medical facilities at worker accommodation are followed.
- ACTED will ensure that adequate clean water, adequate food, and access to medical care is provided to all workers on the worksite and at accommodation.
- ACTED will develop and implement a Traffic Management Plan covering aspect such as vehicle safety, driver, and passenger behaviour, use of drugs and alcohol, operating hours, rest periods, community education on traffic safety and accident reporting and investigations.
- ACTED will develop a Waste Management Plan for the construction phase with clear guidelines for the safe storage and disposal of hazardous waste and handling of hazardous materials.
- ACTED will ensure that its Code of Conduct is followed to regulate the performance and behaviour of all workers, including provision for disciplinary action for anti-social behaviour and non-compliance with health and safety regulations such as lack of use of PPE.

6.2.1.9 Community Health and Safety Impacts

The presence of the Project could affect the health, safety, and wellbeing of the communities in the project area. Increased Project-related traffic, civil works for site preparation including site clearance and excavation work, change to the environment due to increased noise, decreased air quality, inappropriate waste handling or disposal, and accidental leaks and spills, and the presence of the Project workforce all present potential hazards for the health and safety of local communities. Similarly, communities and stakeholder concerns around their safety once they are operational including exposure to radioactive substances also have the potential to affect communities. Construction activities are likely to expose the local communities to health and safety related risks. Local community members could be exposed to accidents which could lead to injuries or fatalities. Collapsing of the towers, falling objects, road accidents caused by construction vehicles, exposure to hazardous wastes from the construction sites among others are potential community health and safety impacts. Further as discussed external workers could bring with them communicable diseases including sexually transmitted diseases (STDs) that could be passed on to local communities.

6.2.1.10 Spread of Public Health Diseases

Construction projects are commonly associated with social interactions amongst the construction workers and local communities which can lead to casual or commercial sexual relationships producing an inherent increased risk of the incidence of the transmission of sexually transmitted diseases (STDs) and HIV. The potential for epidemiological impacts associated with the presence of construction workers is considered moderate.

Impact Significance:
Localised; Moderate and Short Term
Mitigation:

- Sensitize workers and the surrounding communities on awareness, prevention, and management of HIV/AIDS through staff training, awareness campaigns, multimedia and workshops or during community barazas. Provide information, education, and communication about safe uses of drinking water.

6.2.1.11 Gender Based Violence

An influx of in-migrants may also lead to Gender-Based Violence (GBV) (Sexual Exploitation and Abuse (SEA) and Workplace Sexual Harassment (SEA) in the workplace, although the project is not expected to have a large influx of workers, the in-migration may increase the demand for sex work. Furthermore, higher wages for workers in a community can lead to an increase in transactional sex. The risk of incidents of sex between laborers and minors, even when it is not transactional, can also increase. The Project may create changes in the project affected communities and can cause shifts in power dynamics between the community members and within households. Male jealousy, a key driver of GBV, can be triggered by labor influx on a project when workers are believed to be interacting with community women. Hence, abusive behavior can occur not only between project-related staff and those living in and around the project site, but also within the homes of those affected by the project. Potential resettlement for civil works may equally render women vulnerable to GBV.

Impact Significance:

Localised; Low and Short Term

Mitigation:

The following restorative measures are agreed upon.

- Client will extend the Worker Code of Conduct to include guidelines on worker-community interactions and will provide training on the worker code of conduct to all employees including contractors and subcontractors as part of the induction process.
- Community sensitization including disseminating information on GBV (SEA and SH) risks and management protocols.
- Implementing a GBV-SEA/SH management plan to mitigate and respond to GBV cases, including a GRM that is sensitive and confidential.
- Preparation of a “**code of conduct for workers**”. This code of conduct will be signed and followed by all workers involved in the project.

6.2.1.12 Violence Against Children

The recruitment of children under the age of 18 during the construction, operation, and maintenance and decommissioning of the project is a potential risk and considered VAC. Based on current conditions in the sector it is assessed that the risk of child or forced labor is negligible, and already managed through national legislation and the proponent’s corporate requirement. Sex with minors is another form of child labour that may occur during construction, operation and decommissioning mainly by the work force.

Impact Significance:

Localised; Low and Short Term
Mitigation:
<p>The following restorative measures are agreed upon.</p> <ul style="list-style-type: none"> <input type="checkbox"/> ACTED will extend the Worker Code of Conduct to include guidelines on worker –community interactions and will provide training on the worker code of conduct to all employees including contractors and subcontractors as part of the induction process. <input type="checkbox"/> Preparing and implementing a child protection plan <input type="checkbox"/> Employing persons aged 18+ years (in accordance with the labour laws).

6.2.1.13 Labour and Influx

The Project is expected to stimulate very minimal in-migration during construction in pursuit of labour. Several features of the Project could prompt in-migration.

- Local labour requirements: Construction of the project will employ a number of people and will result from this, and this is likely to stimulate significant in-migration. In practice, the level of construction employment available to local workers will be focused on skilled, unskilled, and lower skilled workers.
- Project demand for goods and services: The scale of the Project may generate expectations around opportunities associated with the supply chain. Demand for goods and services in the local study area may be high during construction, and very low during operation, this is still likely to be a strong pull factor.

Impact Significance:
Localised; Low and Short Term
Mitigation:
<p>The following restorative measures are agreed upon.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Preparation of Influx Management Procedure by contractor <input type="checkbox"/> Preparation of Labour and Recruitment Plan by contractor <input type="checkbox"/> Preparation of a “code of conduct for workers”. This code of conduct will be signed and followed by all workers involved in the project.

6.2.1.14 Archeology and Cultural Heritage

The removal of vegetation might uncover cultural sites which can only be removed by the appropriate governmental structures and consultation with the traditional authorities. The potential impacts are likely to be temporary and short term and most of these can be avoided during the vegetation removal process. Based on the baseline data it is not expected that the planned activities will result in negative impacts over the existent cultural and archaeological sites. In terms of embedded controls, during the construction phase of the proposed project the contractor will apply the **Chance Find Procedures** as recommended by ESS 8 (Cultural Heritage).

6.3 Operation Phase and Impacts

6.3.1 Fire and Electrical Impacts

Without provisions for fire safety, there is a risk of fire outbreak at the project sites including market centres and warehouses. Fires can start from ignitable materials within the infrastructures, cigarette smoking in non-designated places or defective electrical connections. The facilities (market centres and warehouses) likely to experience fire related hazards that could lead to occupational health and safety harm (including death), community health and safety injury (including death), accidental releases of infectious and toxic substances as a result of the fire and destruction or property. Common causes of fires are:

1. Electrical circuit overloading
2. Poor electrical maintenance, e.g., poor, and perished insulation on cables
3. Excessively long electrical leads
4. Equipment unnecessarily left switched on
5. Open flames
6. Improper or inadequate ventilation.

Impact Significance:

Local; High and Long Term

Mitigation:

- Fire-fighting equipment should be placed near room doors and at strategic points in corridors and hallways. This equipment may include hoses, buckets (of water or sand) and a fire extinguisher. Fire extinguishers should be regularly inspected and maintained, and their shelf-life kept up to date.
- Fire warnings, instructions and escape routes should be displayed prominently.
- It is essential that all electrical installations and equipment are inspected and tested regularly, including earthing/grounding systems.
- Circuit-breakers and earth-fault-interrupters should be installed in appropriate electrical circuits.
- All electrical equipment should be earthed/grounded, preferably through three-prong plugs.
- All electrical equipment and wiring should conform to national electrical safety standards and codes.

6.3.1.1 Effluent and Solid Waste

Effluent wastes from the facilities (market centres and warehouses) will be non-hazardous in nature but if not properly disposed, will adversely affect the environment, and could lead to impacts and harm human health and bio-physical environment. Unregulated solid waste produced in the market centres and warehouse will increase the burden on waste disposal methods that are environmentally sound consequently.

Impact Significance:

Local; High and Long Term

Mitigation:

- Implement Waste Management Plan
- Provide waste disposal receptors

6.4 Environmental and Social Management Plan

6.4.1 Construction Phase

IMPACT TYPE	POTENTIAL IMPACT	MITIGATION MEASURES	RESPONSIBILITY
A1. Construction Air Impacts	Impact on sensitive receptors	A1-1: Develop a Dust Management Plan;	ACTED Contractor
	Impact on workers' health and safety	A1-2: Record all dust and air quality complaints, identify cause(s), take appropriate measures	
	Impact on community health and safety	A1-3: Liaise with local communities to forewarn of potentially dusty activities;	
	Impact on flora and fauna	A1-4: Undertake monitoring close to dusty activities, noting that this may be daily visual inspections, or passive/active monitoring	
		A1-5: Undertake inspections to ensure compliance with the Dust Management Plan;	
		A1-6: Plan potentially dusty activities so that these are located as far from receptors as feasible	
		A1-7: Avoid run off of mud and water and maintain drains in a clean state;	
		A1-8: Remove dusty materials from site as soon as possible if not being re-used. If being re-used, cover or vegetate if possible.	
		A1-9: Impose speed limits on haul routes and in construction compounds to reduce dust generation.	
		A1-10: Minimise drop heights when loading stockpiles or transferring materials; and	
		A1-11: Avoid waste or vegetation burning.	
		<u>For traffic on unpaved roads:</u>	ACTED Contractor
		A1-12: Undertake watering to attenuate dust near sensitive receptors. The duration and frequency of this should be set out in the Dust Management Plan and will consider water availability and any stakeholder grievances	
		<u>For earthworks:</u>	ACTED Contractor
		A1-13: Revegetate exposed areas as soon as feasible	
		A1-14: Revegetate or cover stockpiles if feasible.	
		A1-15: Expose the minimum area required for the works and undertake; and exposure on a staged basis to minimise dust blow	
		<u>For track out:</u>	ACTED Contractor
		A1-16: Where track out is onto paved roads, use wet road cleaning methods to remove dirt and mud build up;	
		A1-17: Avoid dry sweeping of large areas; and	

		A1-18: Where feasible, undertake wheel washing and vehicle clean down prior to accessing public roads.	
A2. Noise and Vibration Impacts	Impact on sensitive receptors	A2-1: Siting noisy plant and equipment as far away as possible from NSRs, and use of barriers (e.g., site huts, acoustic sheds or partitions) to reduce the level of construction noise at receptors wherever practicable; A2-2: Where practicable noisy equipment will be orientated to face away from the nearest NSRs; A2-3: Working hours for significant noise generating construction work (including works required to upgrade existing access roads or create new ones), will be daytime only; A2-4: Alternatives to diesel and petrol engines and pneumatic units, such as hydraulic or electric-controlled units, will be used, where practicable; A2-5: Where practicable, stationary equipment will be located in an acoustically treated enclosure A2-6: For machines with fitted enclosures, doors and door seals will be checked to ensure they are in good working order; also, that the doors close properly against the seals; A2-7: Throttle settings will be reduced, and equipment and plant turned off, when not being used; A2-8: Equipment will be regularly inspected and maintained to ensure it is in good working order. The condition of mufflers will also be checked; and A2-9: Fitting of mufflers or silencers of the type recommended by manufacturers A2-10: There will also be use of hearing protection gears worn by workers.	ACTED Contractor
	Impact on workers' health and safety		
	Impact on community health and safety		
	Impact on fauna		
A3. Soil erosion and contamination impacts	Impacts on water quality (sediment run-off/contamination) leading to deterioration of quality.	A3-1: Vegetation clearing, and topsoil disturbance will be minimized. A3-2: Sheet erosion of soil shall be prevented where necessary with sandbags, diversion berms, culverts, or other physical means. A3-3: Topsoil shall be stockpiled separate from subsoil. Stockpiles shall not exceed 2 m height, shall be located away from drainage lines, shall be protected from rain and wind erosion, and shall not be contaminated. Wherever possible construction work will take place during the dry season.	ACTED Contractor
	Deteriorated water quality will impact on fauna if consumed.	A3-4: Topsoil shall be evenly spread across the cleared areas when reinstated.	ACTED Contractor
	Deteriorated water quality will impact on community health if consumed.	A3-5: Accelerated erosion from storm events during construction shall be minimised through managing storm water runoff (e.g., velocity control measures).	

		A3-6: Soil backfilled into excavations shall be replaced in the order of removal in order to preserve the soil profile.	ACTED Contractor
		A3-7: Spread mulch generated from indigenous cleared vegetation across exposed soils after construction.	ACTED Contractor
A4. Water Quality Impacts	Impacts on water quality (sediment run off/contamination) leading to deterioration of quality. Deteriorated water quality will impact on fauna if consumed. Deteriorated water quality will impact on community health if consumed.	A4-1: Activities shall be conducted >100m away from water bodies	ACTED Contractor
		A4-2: All wastewater which may be contaminated with oily substances must be managed in accordance with an appropriate waste management plan and no hydrocarbon-contaminated water may be discharged to the environment.	ACTED Contractor
		A4-3: Domestic wastewater shall be treated and disposed of in accordance with an approved waste management plan and in line with EMCA regulations. Park vehicles preferably on paved platform.	ACTED Contractor
A5: Increase in energy demand	Impact on power of the surrounding area	A5-1: Sustainable use of the energy	ACTED Contractor
A6. Impact on Flora and Vegetation	Loss of biodiversity -Disturbance due to noise, vibrations, and vehicle presence.	A6-1: Avoidance of impacts should be prioritized. Where impact avoidance is not possible, existing indigenous vegetation must be kept intact, where possible. Vegetation will be removed only as absolutely necessary.	ACTED Contractor
		A6-2: Rivers, watercourses and other water bodies shall be kept clear of felled trees, vegetation cuttings and organic waste and debris from clearing.	ACTED Contractor
		A6-3: Alien invasive vegetation should be removed immediately and disposed of properly, at a licensed waste disposal facility as necessary;	ACTED Contractor
		A6-4: Materials and equipment should not be delivered to the site prematurely, as this could result in need for laydown or storage areas and additional areas being cleared or affected unnecessarily	ACTED Contractor
		A6-5: Whenever possible, all damaged areas shall be reinstated and rehabilitated upon completion of the contract to as near pre-construction conditions as possible.	ACTED Contractor

		A6-5: All machinery to be washed down prior to departure from prior worksites	
A7. Impact on Fauna	<p>-Impact on storm water quality and thus water quality in the water bodies in project areas</p> <p>-Impact on soil quality</p> <p>-Impact on surface water quality;</p> <p>-Impact on ground water quality; and</p> <p>-Impact on ecological receptors or human health</p>	A7-1: All areas disturbed by construction activities shall be landscaped and rehabilitated.	ACTED Contractor
A8: Solid and Liquid Waste Impacts	-Impacts on aesthetics of the surroundings with the possibility to affect the neighbouring residents.	A8-1: The Contractor should prepare a <u>Solid Waste Management Plan</u> .	ACTED Contractor
A10: Landscape & Visual risks	-Workers are likely to be exposed to work related risks during the construction phase of the project.	<p>A10-1: Any excavated or cut and fill areas will be landscaped and revegetated.</p> <p>A10-2: No debris or waste materials will be left at the work sites, good housekeeping on site to avoid litter and minimise waste</p> <p>A10-3: Ongoing rehabilitation of cleared areas to minimise visual scarring</p>	ACTED Contractor
A11. Labour Influx	-Influx of labour from different ethnicities and different geographical regions might cause conflicts between the workers themselves as well as between workers and the locals.	A11-1: Public relation will be maintained	ACTED Contractor

<p>A12: Worker's Health and Safety and Workers Management</p>	<p>-Workers are likely to be exposed to work related risks during the construction phase of the project.</p>	<p>A12-1: Human Resources Policy, outlines worker rights to be included in all contracts including restrictions on working hours in line with applicable ILO standards, compensation including consideration of overtime, holidays etc.</p>	<p>ACTED Contractor</p>
	<p>-Increased noise decreased air quality, inappropriate waste handling or disposal, and accidental leaks and spills, debris and movement of heavy equipment may pose a safety risk to the general public.</p>	<p>A11-2: Put in place policies in line with national legislation and applicable international legislation and ACTED's Code of Conduct and Policies.</p>	<p>ACTED Contractor</p>
	<p>-Potential impacts on community safety, in particular road accidents, trespass on the sites, and demining activities potentially resulting in accidents leading to injuries or fatalities.</p>	<p>A12-3: Establish contractual clauses to be embedded in the contracts of the contractors that require adherence to GOSS law and international standards to be upheld related to worker rights and providing the contractor and ACTED with the right of audit.</p>	<p>ACTED Contractor</p>
	<p>~ Environmental health: changes to the environment due to increased noise and vibrations, decreased air quality and, inadequate management of waste.</p> <p>~ Impact from workers presence and potential interaction with local populations</p>	<p>A12-4: Pre-employment medical assessments will be put in place as a workforce risk management tool to screen individuals for risk factors that may limit their ability to perform a job safely and effectively. Expected benefits of conducting a pre-employment medical assessment include a safer working environment, reduction in workplace injuries, minimised downtime, matching the capacity of the employee with the role, and overall recruitment cost and risk reduction.</p> <p>A12-5: Ensure that training on health and safety measures is provided to all construction workers prior to starting to work on the Project and that supervisors have adequate experience to deliver on their responsibilities.</p> <p>A12-6: Implement regular health and safety checks and audits of Workers, contractors and subcontractors and implementing sanctions in case of breaches of national standards</p> <p>A12-7: Develop and implement a Workers Grievance Mechanism for the Project workforce including contractors and subcontractor's standards and the Project's specific standards. Such audits to include workplace H&S; worker contracts, working hours, pay and conditions; housing and food standards.</p> <p>A12-8: Establish a procedure for the recording and analysis of incidents and lessons learned such that additional actions can be implemented to avoid or minimize occupational health and safety risks.</p> <p>A12-9: Ensure that facilities and work sites are designed and maintained such that robust barriers are in place to prevent accidents.</p> <p>A12-10: Ensure that its Code of Conduct is followed to regulate the performance and behaviour of all workers, including provision for disciplinary action for anti-social behaviour and non-compliance with health and safety regulations such as lack of use of PPE.</p>	<p>ACTED Contractor</p>

		A12-11: Ensure that adequate clean water, adequate food and access to medical care is provided to all workers on the worksite and at accommodation.	
A13: Community Health and Safety Impacts	<p>-Increased noise decreased air quality, inappropriate waste handling or disposal, and accidental leaks and spills, debris and movement of heavy equipment may pose a safety risk to the general public.</p> <p>-Potential impacts on community safety, in particular road accidents, trespass on the sites, and demining activities potentially resulting in accidents leading to injuries or fatalities.</p> <p>~ Environmental health: changes to the environment due to increased noise and vibrations, decreased air quality and, inadequate management of waste.</p> <p>~ Impact from workers presence and potential interaction with local populations</p> <p>-Gender-based violence at the community level</p> <p>-Sexual Exploitation and Abuse</p> <p>-Transactional sex.</p>	<p>A13-1: Develop and monitor the implementation of a Community Health and Safety Management Plan which will include the following measures:</p> <ul style="list-style-type: none"> • Ensure all workers including contractors and subcontractors undergo pre-employment screening and regular health screening. • Ensure any trucking companies employed to work on the Project will have policies around health screening of their workers in line with Project requirements. • Ensure all workers including contractors receive education on symptoms of communicable diseases of concern and STDs. • Provide access to health care for those injured by its activities. • Ensure that work sites are fenced and that signs are put up around work fronts and construction sites advising people of the risks associated with trespass. 	ACTED Contractor
		<p>A13-2:</p> <ul style="list-style-type: none"> • Contractor will extend the Worker Code of Conduct to include guidelines on worker–community interactions and will provide training on the worker code of conduct to all employees including contractors and subcontractors as part of the induction process. • Contractor will provide first aid at site to avoid pressure on local healthcare infrastructures. • Contractor will develop and implement a Traffic Management Plan covering aspect such as vehicle safety, driver and passenger behaviour, use of drugs and alcohol, operating hours, rest periods, community education on traffic safety and accident reporting and investigations 	ACTED Contractor

	-Shift in power dynamics in the community or family. -Abusive behaviour among project-related staff		
A14: Gender-based violence at the community level	-Violation of children rights by contractor and labour force on site (e.g., child labour, sexual relations with minors etc.)	A14-1: Contractor will extend the Worker Code of Conduct to include guidelines on worker –community interactions and will provide training on the worker code of conduct to all employees including contractors and subcontractors as part of the induction process.	ACTED Contractor
A15: Violation of children rights by contractor and labour force on site	-Restriction to access cultural sites. -Destruction of cultural sites during construction or operations	A15-1: Contractor will extend the Worker Code of Conduct to include guidelines on worker –community interactions and will provide training on the worker code of conduct to all employees including contractors and subcontractors as part of the induction process. A15-2: Prepare and implement a child protection plan and monitoring the employment register, A15-3: Employing persons aged 18+ years	ACTED Contractor
A14: Archaeology and Cultural Heritage Impacts	-Impacts to soil and surface water from spill events	A14-1: Consult community when any community issue arises in order to engage traditional forms of community leadership. Develop stakeholder engagement procedures to guide consultations. A14-2: Do not remove any cultural heritage including graves without prior consultation to the communities and fulfilling the legal requirements. Any removal of cultural heritage should be conducted by the best available techniques. A14-3: Establish a grievance procedure to ensure community concerns are addressed. A14-4: Develop a chance find procedure which will detail the appropriate course of action that must be followed for any relevant cultural heritage discoveries.	ACTED Contractor

6.4.2 Operation Construction Phase

IMPACT TYPE	POTENTIAL IMPACT	MITIGATION MEASURES	RESPONSIBILITY
B1: Worker's Health and Safety and Workers Management	Impacts associated with inadequate management of waste from the Facility to among others: -	B1-1 Provide PPEs to all workers B1-2 Ensure there is a First Aid Kit in facility B1-3 Ensure fire extinguishers are available in strategic locations in the facility	GORSS

	(Human Health Risks, Occupational Health and Safety Risks, Community Health and Safety Risks, Environmental Risks)	<input type="checkbox"/> Develop a solid waste management plan	
B2: Solid and Liquid Waste Impacts	Impacts associated with inadequate management of infectious effluent/liquid waste from Facility leading to among others: - (Human Health Risks, Occupational Health and Safety Risks, Community Health and Safety Risks, Environmental Risks)	B 2-1: Ensure waste receptors are available in strategic points in the plant. B 2 -2. Recycle wastes B 2-3: Ensure wastes are disposed <input type="checkbox"/> Develop a liquid waste management plan <input type="checkbox"/> Provide PPE for workers handling for infectious and hazardous liquid wastes	GORSS
Fire Hazards	Impacts associated with Fire Hazards from the Facility design leading to among others: - (Human Health Risks, Occupational Health and Safety Risks, Community Health and Safety Risks, Environmental Risks)	<input type="checkbox"/> Fire-fighting equipment should be placed near room doors and at strategic points in corridors and hallways. This equipment may include hoses, buckets (of water or sand) and a fire extinguisher. Fire extinguishers should be regularly inspected and maintained, and their shelf-life kept up to date. <input type="checkbox"/> Close cooperation between safety officers and local fire prevention officers is essential. <input type="checkbox"/> The assistance of local fire prevention officers in the training of staff in fire prevention, immediate action in case of fire and the use of fire-fighting equipment is desirable. <input type="checkbox"/> Fire warnings, instructions and escape routes should be displayed prominently in each room and in corridors and hallways. <input type="checkbox"/> It is essential that all electrical installations and equipment are inspected and tested regularly, including earthing/grounding systems. <input type="checkbox"/> Circuit-breakers and earth-fault-interrupters should be installed in appropriate electrical circuits. <input type="checkbox"/> All electrical equipment should be earthed/grounded, preferably through three-prong plugs. <input type="checkbox"/> All electrical equipment and wiring should conform to national electrical safety standards and codes.	GORSS

Electrical Hazards	Impacts associated with Electrical Hazards from the Facility leading to among others: - (Human Health Risks, Occupational Health and Safety Risks, Community Health and Safety Risks, Environmental Risks)	<input type="checkbox"/> It is essential that all electrical installations and equipment are inspected and tested regularly, including earthing/grounding systems. <input type="checkbox"/> Circuit-breakers and earth-fault-interrupters should be installed in appropriate electrical circuits. <input type="checkbox"/> All electrical equipment should be earthed/grounded, preferably through three-prong plugs. <input type="checkbox"/> All electrical equipment and wiring should conform to national electrical safety standards and codes.	GORSS
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6.4.3 Decommissioning Phase

IMPACT TYPE	POTENTIAL IMPACT	MITIGATION MEASURES	RESPONSIBILITIES
C1. Demolition Air Impacts	Impact on sensitive receptors Impact on workers' health and safety Impact on community health and safety Impact on flora and fauna	C1-1: Develop a Dust Management Plan; C1-2: Record all dust and air quality complaints, identify cause(s), take appropriate measures C1-3: Liaise with local communities to forewarn of potentially dusty activities; C1-4: Undertake monitoring close to dusty activities, noting that this may be daily visual inspections, or passive/active monitoring C1-5: Undertake inspections to ensure compliance with the Dust Management Plan; C1-6: Plan potentially dusty activities so that these are located as far from receptors as feasible C1-7: Erect solid screens if feasible around stockpiles; C1-8: Avoid run off of mud and water and maintain drains in a clean state; C1-9: Remove dusty materials from site as soon as possible if not being re-used. If being re-used, cover or vegetate if possible; C1-10: Impose speed limits on haul routes and in compounds to reduce dust generation; C1-11: Minimise drop heights when loading stockpiles or transferring materials; and C1-12: Avoid waste or vegetation burning.	GORSS
		For traffic on unpaved roads:	GORSS

		<p>C1-13: Undertake watering to attenuate dust near sensitive receptors. The duration and frequency of this should be set out in the Dust Management Plan and will consider water availability and any stakeholder grievances; and</p> <p>C1-14: On unpaved roads in use for more than 1 month, consider use of surface and sealants to reduce the use of water and water trucks. Use of lignin-based sealants recommended due to low environmental toxicity.</p>	
		<p><u>For earthworks:</u></p> <p>C1-15: Revegetate exposed areas as soon as feasible</p> <p>C1-16: Revegetate or cover stockpiles if feasible;</p> <p>C1-17: Expose the minimum area required for the works and undertake; and exposure on a staged basis to minimise dust blow</p>	GORSS
		<p><u>For track out:</u></p> <p>C1-18: Where track out is onto paved roads, use wet road cleaning methods to remove dirt and mud build up;</p> <p>C1-19: Avoid dry sweeping of large areas; and</p> <p>C1-20: Where feasible, undertake wheel washing and vehicle clean down prior to accessing public roads.</p>	GORSS
C2. Demolition Noise and Vibration Impacts	Impact on sensitive receptors	<p>C2-1: Siting noisy plant and equipment as far away as possible from NSRs, and use of barriers (e.g., site huts, acoustic sheds or partitions) to reduce the level of decommissioning noise at receptors wherever practicable;</p> <p>C2-2: Where practicable noisy equipment will be orientated to face away from the nearest NSRs;</p> <p>C2-3: Working hours for significant noise generating decommissioning work (including works required to upgrade existing access roads or create new ones), will be daytime only;</p>	GORSS
	Impact on workers' health and safety		
	Impact on community health and safety	<p>C2-4: Alternatives to diesel and petrol engines and pneumatic units, such as hydraulic or electric-controlled units, will be used, where practicable;</p>	GORSS
	Impact on fauna	<p>C2-5: Where practicable, stationary equipment will be located in an acoustically treated enclosure</p>	GORSS
		<p>C2-6: For machines with fitted enclosures, doors and door seals will be checked to ensure they are in good working order; also, that the doors close properly against the seals;</p>	GORSS
		<p>C2-7: Throttle settings will be reduced, and equipment and plant turned off, when not being used;</p> <p>C2-8: Equipment will be regularly inspected and maintained to ensure it is in good working order. The condition of mufflers will also be checked; and</p>	GORSS

		C2-9: Fitting of mufflers or silencers of the type recommended by manufacturers	
C3. Soil erosion and contamination impacts	Impacts on water quality (sediment run-off/contamination) leading to deterioration of quality. Deteriorated water quality will impact on fauna if consumed. Deteriorated water quality will impact on community health if consumed.	C3-1: Vegetation clearing, and topsoil disturbance will be minimized. C3-2: Contour temporary and permanent access roads/laydown areas so as to minimise surface water runoff and erosion; C3-3: Sheet erosion of soil shall be prevented where necessary with sandbags, diversion berms, culverts, or other physical means. C3-4: Topsoil shall be stockpiled separate from subsoil. Stockpiles shall not exceed 2 m height, shall be located away from drainage lines, shall be protected from rain and wind erosion, and shall not be contaminated. Wherever possible decommissioning work will take place during the dry season.	GORSS
		C3-5: Topsoil shall be evenly spread across the cleared areas when reinstated. C3-6: Accelerated erosion from storm events during decommissioning shall be minimised through managing storm water runoff (e.g., velocity control measures).	GORSS
		C3-7: Soil backfilled into excavations shall be replaced in the order of removal in order to preserve the soil profile. Material (e.g., fuel or chemicals).	GORSS
		C3-8: Spread mulch generated from indigenous cleared vegetation across exposed soils after decommissioning.	GORSS
C4. Surface Water Quality Impacts	Impacts on water quality (sediment run-off/contamination) leading to deterioration of quality. Deteriorated water quality will impact on fauna if consumed. Deteriorated water quality will impact on community health if consumed.	C4-1: Activities shall be conducted >100m away from water bodies, except where crossings are required.	GORSS
		C4-2: All wastewater which may be contaminated with oily substances must be managed in accordance with an appropriate waste management plan and no hydrocarbon-contaminated water may be discharged to the environment.	GORSS
		C4-3: Domestic wastewater shall be treated and disposed of in accordance with an approved waste management plan. Park vehicles preferably on paved platforms	GORSS

C5. Impact on Flora and Vegetation	Loss of biodiversity. Fragmentation of habitat.	C5-1: Avoidance of impacts should be prioritized, it is strongly recommended to closely/re-route follow the main road along the project area of influence Where impact avoidance is not possible, existing indigenous vegetation must be kept intact, where possible. Vegetation will be removed only as absolutely necessary.	GORSS
		C5-2: Rivers, watercourses and other water bodies shall be kept clear of felled trees, vegetation cuttings and organic waste and debris from clearing.	GORSS
		C5-3: Alien invasive vegetation should be removed immediately and disposed of properly, at a licensed waste disposal facility as necessary;	GORSS
		C5-4: There should be no deviation from the access road position without prior discussions with the authorities; C5-5: Firewood collection by the project's employees should be strictly forbidden.	GORSS
		C5-6: Rehabilitation of temporary decommissioning. sites and pioneer camps (if needed) should be done as swiftly as possible and always with suitable native grasses and other plants – construction of new camps is unlikely to happen;	GORSS
		C5-8: Whenever possible, all damaged areas shall be reinstated and rehabilitated upon completion of the contract to as near pre-construction conditions as possible	GORSS
		C5-8: Whenever possible, all damaged areas shall be reinstated and rehabilitated upon completion of the contract to as near pre-construction conditions as possible	GORSS
C6. Impact on Fauna	-Disturbance due to noise, vibrations, and vehicle presence.	C6-1: All areas disturbed by decommissioning activities shall be landscaped and rehabilitated;	GORSS
		C6-2: Vegetation that does not grow high enough to cause interference with the overhead power lines, or cause a fire hazards, should not be trimmed or cut unless it is growing in the road access area C6-3: Speed of project vehicles should be controlled at a maximum limit of 40 km/h to minimise roadkill C6-4: No hunting by Project personnel is to be tolerated under any circumstances (this measure should be a part of worker codes of conduct)	GORSS

		<p>C6-5: Guidance shall be given to all staff that they are not allowed to harm any animals during any routine maintenance of the project's infrastructure.</p> <p>C6-6: No hunting by Project personnel is to be tolerated under any circumstances (this measure should be a part of worker codes of conduct)</p>	GORSS
C8: Solid and Liquid Waste Impacts	<p>-Impact on storm water quality and thus water quality in the water bodies in project areas</p> <p>-Impact on soil quality</p> <p>-Impact on surface water quality;</p> <p>-Impact on ground water quality; and</p> <p>-Impact on ecological receptors or human health</p>	C8-1: The Contractor should prepare a Solid Waste Management Plan.	GORSS
C10: Landscape & Visual amenities risks	-Impacts on aesthetics of the surroundings with the possibility to affect the neighbouring residents.	<p>C10-1: Any excavated or cut and fill areas will be landscaped and revegetated.</p> <p>C10-2: No debris or waste materials will be left at the work sites, good housekeeping on site to avoid litter and minimise waste</p> <p>C10-3: Night lighting of sites should be minimized within requirements of safety and efficiency.</p> <p>C10-5: Ongoing rehabilitation of cleared areas to minimise visual scarring and maintenance clearing will be kept to the absolute minimum and should not extend beyond the corridor;</p>	GORSS
C11: Worker's Health and Safety and Workers Management	-Workers are likely to be exposed to work related risks during the decommissioning phase of the project.	C11-1: ACTED will develop a Human Resources Policy, which will outline worker rights to be included in all contracts including restrictions on working hours in line with applicable ILO standards, compensation including consideration of overtime, holidays etc.	GORSS
		C11-2: ACTED will require its contractors and subcontractors to put in place policies in line with national legislation and applicable international legislation and ACTED's Code of Conduct and Policies.	GORSS
		C11-3: ACTED will establish contractual clauses to be embedded in the contracts of the EPC and all sub-contractors that require adherence to GOSS law and international standards to be upheld related to worker rights.	GORSS
		C11-4: Pre-employment medical assessments will be put in place as a workforce risk management tool to screen individuals for risk factors that	GORSS

		<p>may limit their ability to perform a job safely and effectively. Expected benefits of conducting a pre-employment medical assessment include a safer working environment, reduction in workplace injuries, minimised downtime, matching the capacity of the employee with the role, and overall recruitment cost and risk reduction.</p> <p>C11-5: ACTED will ensure that training on health and safety measures is provided to all workers prior to starting to work on the Project and that supervisors have adequate experience to deliver on their responsibilities.</p> <p>C11-6: ACTED will implement regular health and safety checks and audits of Workers, contractors and subcontractors and implementing sanctions in case of breaches of national standards</p> <p>C11-7: ACTED will develop and implement a Workers Grievance Mechanism for the Project workforce including contractors and subcontractor's standards and the Project's specific standards. Such audits to include workplace H&S; worker contracts, working hours, pay, and conditions; housing and food standards.</p> <p>C11-8: ACTED will establish a procedure for the recording and analysis of incidents and lessons learned such that additional actions can be implemented to avoid or minimize occupational health and safety risks.</p> <p>C11-9: ACTED will ensure that facilities and work sites are designed and maintained such that robust barriers are in place to prevent accidents.</p> <p>C11-10: ACTED will ensure that its Code of Conduct is followed to regulate the performance and behaviour of all workers, including provision for disciplinary action for anti-social behaviour and non-compliance with health and safety regulations such as lack of use of PPE.</p> <p>C11-11: ACTED will ensure that adequate clean water, adequate food and access to medical care is provided to all workers on the worksite and at accommodation.</p>	
<p>C12: Community Health and Safety Impacts</p>	<p>-Increased noise decreased air quality, inappropriate waste handling or disposal, and accidental leaks and spills, debris and movement of heavy equipment may pose a</p>	<p>C12-1: ACTED will develop and monitor the implementation of a Community Health and Safety Management Plan which will include the following measures:</p> <ul style="list-style-type: none"> • Ensure that all workers are housed in accommodation camps rather than in the local settlements in order to minimize interaction with local communities and related health and safety impacts. 	<p>GORSS</p>

	<p>safety risk to the general public.</p> <p>-Potential impacts on community safety, in particular road accidents, trespass on the sites, and demining activities potentially resulting in accidents leading to injuries or fatalities.</p> <p>~ Environmental health: changes to the environment due to increased noise and vibrations, decreased air quality and, inadequate management of waste.</p> <p>~ Impact from workers presence and potential interaction with local populations</p>	<ul style="list-style-type: none"> • Ensure all workers including contractors and subcontractors undergo pre-employment screening and regular health screening including voluntary screening for STDs. • Ensure any trucking companies employed to work on the Project will have policies around health screening of their workers in line with Project requirements. • Ensure all workers including contractors and subcontractors receive education on symptoms of communicable diseases of concern and STDs. • Provide access to health care for those injured by its activities. • Ensure that work sites are fenced and that signs are put up around work fronts and decommissioning sites advising people of the risks associated with trespass. When work fronts are less than 100 metres from a community or house, employ security guards from the local community to prevent trespass. • Undertake a programme of stakeholder engagement and consultation to educate local communities of the risks of trespassing onto sites, the meaning of signs, and the dangers of playing on or near equipment or entering fenced areas. 	
		<p>C12-2:</p> <ul style="list-style-type: none"> • ACTED will extend the Worker Code of Conduct to include guidelines on worker –community interactions and will provide training on the worker code of conduct to all employees including contractors and subcontractors as part of the induction process. • ACTED will implement a Community Grievance Mechanism. • ACTED will develop and implement a Traffic Management Plan covering aspect such as vehicle safety, driver and passenger behaviour, use of drugs and alcohol, operating hours, rest periods, community education on traffic safety and accident reporting and investigations 	<p>GORSS</p>
<p>C13: Gender-based violence at the community level</p>	<p>-Gender-based violence at the community level</p> <p>-Forced Early Marriages</p> <p>-Sexual Exploitation and Abuse</p> <p>-Transactional sex.</p>	<p>C13-1: ACTED will extend the Worker Code of Conduct to include guidelines on worker –community interactions and will provide training on the worker code of conduct to all employees including contractors and subcontractors as part of the induction process.</p> <p>Establish a link between ACTED activities or operations with, GBV cases at the community level such as domestic violence. This is to ensure that all</p>	<p>GORSS</p>

	-Shift in power dynamics in the community or family. -Abusive behavior among project-related staff	GBV cases reported at the community level and resulting from or exacerbated by project operations are managed effectively.	
C14: Violation of children rights by contractor and labour force on site	-Violation of children rights by contractor and labour force on site (e.g., child labour, sexual relations with minors etc.)	C14-1: ACTED will extend the Worker Code of Conduct to include guidelines on worker –community interactions and will provide training on the worker code of conduct to all employees including contractors and subcontractors as part of the induction process. C 14-2: Prepare and implement child protection strategy C14-3: Prepare and implement a child protection plan and monitoring the employment register, C14-4: Employing persons aged 18+ years	GORSS
C15: Archaeology and Cultural Heritage Impacts	-Restriction to access cultural sites. -Destruction of cultural sites during decommissioning.	C15-1: Consult community when any community issue arises in order to engage traditional forms of community leadership. Develop stakeholder engagement procedures to guide consultations. C15-2: Work with local community representatives to develop cultural awareness materials (that will cover key issues including the location and importance of all local cultural sites and other cultural sensitivities (graves). Develop stakeholder engagement procedures to guide consultations. C15-3: Should decommissioning activity be required in proximity to existing graves, develop and implement working protocols in consultation with local traditional leaders. Develop stakeholder engagement procedures to guide consultations. C15-4: Do not remove any cultural heritage including graves without prior consultation to the communities and fulfilling the legal requirements. Any removal of cultural heritage should be conducted by the best available techniques. C15-5: Establish a grievance procedure to ensure community concerns are addressed. C15-6: Develop a chance find procedure which will detail the appropriate course of action that must be followed for any relevant cultural heritage discoveries.	GORSS

6.5 Monitoring Indicators

Project Activity/Aspect	Impact/Effect	Monitoring Indicator	Institutional Responsibility	
			Monitoring Responsibility	Frequency
A. Labour Influx	<p>A-1 Higher rates of violence, injury,</p> <p>A-2 Alcohol and drug consumption and</p> <p>A-3 Sexually transmitted diseases in the local population.</p> <p>A-4 social conflicts within and between communities</p>	<p>Development/Implementation</p> <ul style="list-style-type: none"> • HR Policy • Labour Influx Management Plan • GBV (SEA and SH) Management Plan <p>Indicators</p> <ul style="list-style-type: none"> • HR records on the percentage of local versus non-local employment. • Number/attendance records of Sensitization meetings held on GBV, SEA, HIV/AIDS and other STIs etc. • Review of training attendance records of capacity enhancement and transfer of knowledge that local personnel have received. • Code of conduct included in contracts • Established link between activities/operations with GBV at the community level such as domestic violence. This is to ensure that all GBV cases reported at the community level and resulting from or exacerbated by project operations are managed effectively. 	HSE Manager Human Resource Manager Contractor.	<ul style="list-style-type: none"> • Prior to construction commencing for Local Content and Procurement Plan. • During construction and decommissioning phase for employment. • Quarterly for training-related measures.
B. Air Quality/ Atmospheric Conditions	B-1 Dust Emissions associated with construction activities	Dust deposition in adjoining areas to be physically monitored	Contractor/HSE	<ul style="list-style-type: none"> • At least once during excavation and casting
C. Noise	C-1 Noise from construction activities <i>(To be managed by equipment choice and arrangement of construction activities)</i>	<ul style="list-style-type: none"> • Part of the contractors' contract 	Contractor	<ul style="list-style-type: none"> • Each schedule of construction activities

Project Activity/Aspect	Impact/Effect	Monitoring Indicator	Institutional Responsibility	
			Monitoring Responsibility	Frequency
D. Soils	D-1 Dumping of construction material outside the project construction footprint D-2 Erosion and compaction D-3 Contamination due to spill of civil construction material	<ul style="list-style-type: none"> • Visual checks at construction site • Visual inspection during casting 	Contractor	<ul style="list-style-type: none"> • At least once
E. Ecology	E-1 Disruption to existing flora and fauna E-2 Loss of vegetation	<ul style="list-style-type: none"> • Number of revegetated areas. • % area of site cleared vs. remaining un-cleared land. 	Contractor	<ul style="list-style-type: none"> • Continuous
F. Waste	F-1 Accumulation of waste on site causing nuisances such as odor, pest control problems and general litter.	<ul style="list-style-type: none"> • Development of Waste Management Plan • Routine weekly checks of waste management arrangements should be undertaken. 	Contractor	<ul style="list-style-type: none"> • Continuous
G. Traffic and Transport	G-1 Increase in traffic	<ul style="list-style-type: none"> • Development/implementation of traffic management plan 		<ul style="list-style-type: none"> • Continuous
H. Landscape and Visual Amenity	H-1 Visual scarring of the landscape	<ul style="list-style-type: none"> • Inspection on a daily basis 	Contractor	Continuous throughout the construction phase
I. Workers Health, Safety and Labour Rights	I-1 Workers' health and safety Respect for labour rights	<ul style="list-style-type: none"> • Worker Health and Safety Management System • Human Resources Policy. • Traffic Management Plan • Verify contractual clauses of Contractor and all sub-contractors requiring adherence to GOSS law and international standards. • Records of incidents and accidents. 	Contractor	<ul style="list-style-type: none"> • Continuous (construction, operation and decommissioning phase)

Project Activity/Aspect	Impact/Effect	Monitoring Indicator	Institutional Responsibility	
			Monitoring Responsibility	Frequency
		<ul style="list-style-type: none"> Record on training sessions and attendance on health and safety measures Record of lessons learned to minimize occupational health and safety. Code of Conduct document 		
J. Community Impacts	J-1 Labour Influx (<i>Health impacts including risks of STDs, HIV/AIDS</i>) J-2 Community expectation for local benefits	Development/Implementation <ul style="list-style-type: none"> Labour influx Management Plan GBV (SEA and SH) Management Plan Number/attendance records (communities and workers) of sensitization meetings held on GBV (SEA and SH), HIV/AIDS and other STDs etc. Review of training attendance records of capacity enhancement and transfer of knowledge that local personnel have received. Code of conduct included in contracts 	Contractor	Construction and decommissioning phase
	J-3 Violence against Children	<ul style="list-style-type: none"> Policies against VAC in place HR Policy Records of employees with National ID card indicated 	Contractor	Construction, operation and decommissioning phase
	J-4 Gender Based Violence (SEA/SH)	<ul style="list-style-type: none"> Policies against GBV (SEA/SH) in place HR Policy Attendance records of sensitization meetings held on GBV 	Contractor	Continuous throughout the construction phase
K. Cultural Heritage	K-1 Cultural and religious sensitivities maybe impacted by project	<ul style="list-style-type: none"> Chance Find Procedures Records of training on chance find procedures 	Contractor	Continuous throughout the construction phase
L. Local amenities and infrastructure	L-1 Pressure to local infrastructure from use of local resources	<ul style="list-style-type: none"> Availability of grievance redress process Number of grievances reported Number of grievances resolved in a timely manner 	Contractor	Continuous throughout the construction phase

6.6 Environmental and Social Management Process

This ESMF contains potential mitigation measures and monitoring indicators (*see tables above*) through which the adverse impacts may be avoided, minimised, mitigated or compensated. ESIA studies will be conducted for each of the projects once the locations and designs of the projects are known.

6.7 Monitoring Plans

6.7.1 Monitoring of Environmental and Social Indicators

The goal of monitoring is to measure the success rate of the project, determine whether interventions have resulted in dealing with negative impacts, whether further interventions are needed, or monitoring is to be extended in some areas. Monitoring indicators will be very much dependent on specific project contexts.

Monitoring Levels-Overall Project Level

ACTED will be responsible for monitoring and reporting on compliance with the ESMF and will report results of this monitoring to the KfW and GOSS.

KfW's Monitoring Support

KfW will provide the second line of monitoring compliance and commitments made in the ESIA and RAPs through supervision albeit in a less frequent manner and detail as compared to the first line of monitoring that will be undertaken by ACTED. KfW will further undertake monitoring during its scheduled implementation support missions.

Table 6-3. Monitoring Indicator

Monitoring Level	Monitoring Issue	Verifiable Indicators	Responsibility
ESMF Level	<ul style="list-style-type: none"> ■ Adequate dissemination of ESMF to stakeholders. ■ Capacity building and training programs ■ Preparation of ESIA /reports ■ Monitoring and evaluation 	<ul style="list-style-type: none"> ■ Record of consultations and meetings; ■ Workshop reports. ■ Consultants hired to prepare ESIA ■ ESIA Reports ■ Monitoring Reports, ■ Annual Environmental Audit Reports 	<ul style="list-style-type: none"> ■ ACTED

6.8 Monitoring Roles and Responsibilities

6.8.1 ACTED Staff

The ACTED staff will provide oversight, review of screening reports, review of ESIA, monitoring and evaluation of all the control activities.

6.9 Reporting

6.9.1 Regular Reporting

ACTED will be required to prepare and submit to KfW regular monitoring progress reports on the environmental, social, health and safety (ESHS) performance of the Project, including but not limited to, status of preparation and implementation of E&S documents required, stakeholder engagement activities, and the functioning of the grievance

mechanism. Reporting will be quarterly and annually throughout the project implementation period.

6.9.2 Incidents and Accidents

ACTED will promptly notify the KfW (within 48 hours) of any incident or accident related to the Project which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers including child abuse, gender-based violence. ACTED will provide sufficient detail regarding the incident or accident, indicating immediate measures taken or that are planned to be taken to address it, and any information provided by any contractor and supervising entity, as appropriate. Subsequently, as per the KfW's request, ACTED will prepare a report on the incident or accident and propose any measures to prevent its recurrence. The incident report will be prepared by undertaking Root Cause Analysis (RCA), after the KfW's request for such an analysis, along with measures to prevent recurrence to be provided within fifteen days.

7 PROJECT REVIEW, COORDINATION & IMPLEMENTATION ARRANGEMENTS

This chapter describes the implementation and coordination arrangements with respect to management of the environmental and social risks and impacts of ACTED's proposed activities, the reporting requirements and review of documents.

7.1 Environmental and Social Instruments

The World Bank Environmental and Social Standards classifies the sub projects as **Substantial**. Similarly, the KfW's Sustainability Guideline of February 2022, categorizes the sub projects as **Category B** (Moderate Risk). The GOSS does not have in place a legislation that requires categorization of projects in line with the risk significance. The ACTED's sub projects will be screened in line with World Bank's ESS.

7.1.1 Screening

Screening of sub projects using a screening checklist will commence as soon as the specific sub project details are known including nature and scope, proposed location, and area among other parameters. The screening process could result in any of the following determination: -

1. ESIA report
2. No further environmental study

7.1.2 Who prepares a Screening Checklist?

ACTED's staff will screen all subproject. Screening will determine the environmental and social issues that the subproject might trigger, and the type and level of assessment required (see screening form in annex A). The screening will be prepared by ACTED for each sub project.

7.1.3 Preparation and Review of Sub Project ESIA

Based on the outcome of the screening, ACTED will prepare draft ToRs for ESIA's (**Annex D** for sample ToR). ACTED will competitively select experts to prepare ESIA for the subprojects based on the screening.

7.1.4 Annual Environmental and Social Audit

An independently commissioned environmental and social audit will be carried out on an annual basis. ACTED, will lead the implementation of any corrective measures that are required. However, such corrective action plans will be shared with the Bank for review purpose. An audit is necessary to ensure (i) that the follow-up sub project instruments (ESIAs) are being implemented appropriately, and (ii) that mitigation measures are being identified and implemented. The environmental and social audit will be able to identify any amendments in the ESMF approach that are required to improve its effectiveness.

8 CAPACITY BUILDING, TRAINING AND TECHNICAL ASSISTANCE

This chapter describes the existing human resources capacity within the ACTED that will provide focal support in the management and mitigation of the environmental and social risks. It also details measures that will be implemented to strengthen environmental and social risk management at ACTED and increase understanding of ESMF.

8.1 Institutional Capacity for ESMF Implementation

In order to strengthen the capacity of ACTED and other implementing agencies, the following capacity building efforts are recommended. To ensure that the message and quality of training is assured, ACTED should engage consultants to support the trainings.

Table 8-1. Capacity Building

Training Topic	Target
World Bank ESS; KfW's Sustainability Guidelines; Impact Assessment and Monitoring	ACTED

9 GRIEVANCE REDRESS

This chapter describes the consultations conducted during the preparation of the ESMF, the disclosure arrangements and the grievance redress mechanism in place for use during the project implementation.

9.1 Grievance Redress Mechanism

The objective of grievance handling systems and procedure is to establish for the communities a mechanism for raising complaints related to spray operations and having such complaints resolved as amicably as possible through acceptable and binding corrective actions. Based on the understanding of the project areas and the stakeholders, an indicative list of the types of grievances have been identified and may include: -

- Issues related to contamination of water sources
- Issues related to sexual exploitation and abuse;
- Issues related to child labour and protection;
- Disturbances to locals due to influx of migrant workers in the area;
- Noise impacts
- Issues related to poor disposal of wastes

9.1.1 Grievance Management and Reporting Levels

There are 5 levels of grievances management proposed in this ESMF, but which will be revised and elaborated further following the completion of project wide GRM that is being set up.

Level 1. Boma Level Grievance Management Committee

A Grievance Management Committees will be established in each of the affected Bomas and will be coordinated by the chief of the Boma. The composition of the Boma Grievance Management Committee will include:

1. Chief
2. Assistant Chief
3. Community Representatives
4. ACTED

Level 2. Payam Level Grievance Management Committee

A Grievance Management Committees will be established in each of the affected Payam and will be coordinated by the Payam Administrator. Grievances that cannot be resolved at the Payam level, will be escalated to the County Level Grievance Management Committees. The composition of the Grievance Management Committee will include:

1. Payam Administrator
2. Community Representatives
3. ACTED

Level 3. County Level Grievance Management Committees

In each of the 3 Counties, a Grievance Management Committees will be established and will be coordinated by the County Commissioner. Grievances that cannot be resolved at

the County level, will be escalated to the State Grievance Management Committees. The composition of the Grievance Management Committee will include:

- County Commissioner
- Community Representatives
- ACTED

Level 4. State Level Grievance Management Committees

A Grievance Management Committees will be established at the State level and will be coordinated by the Governor. Grievances that cannot be resolved at the County level, will be escalated to the State Grievance Management Committees. The composition of the Grievance Management Committee will include:

- Governor
- Community Representatives
- ACTED

Level 5. Judicial Recourse

In case this mechanism will not allow an amicable agreement to be reached, the complainant can resort to justice within GOSS’s legal system (and could at any time even without going through the established committees).

9.1.2 Publicizing and Disclosure of the GRM

The project wide GRM will be disclosed to the stakeholders through written and verbal communication. The mediums to be used for this purpose are public meetings, group discussions, electronic media (radio) etc. and will be elaborated in the project wide Grievance Redress Mechanism (GRM) is being set up. The project wide GRM disclosure will be done along with the disclosure of other plans

9.1.3 Receiving and Recording Grievances

As part of the GRM, the grievances from the stakeholder may be communicated verbally (in person or over a telephonic conversation) or in written form (in the format given below). A sample grievance form is in annex (B).

9.1.4 Maintaining a Grievance Register

Each grievance thus received, shall be recorded in a grievance register. The format for the grievance register shall be as outlined in annex (C). The grievance register shall be updated at each stage of the grievance redressal.

9.1.5 Acknowledgment of Grievance

Upon the completion of the recording of the grievance, the stakeholder will be provided with an acknowledgment of the receipt, along with a summary of the grievance.

Table 9-1: Sample Acknowledgement Receipt for Claimant

Dear (enter name of the aggrieved)
Date:
RE: <u>Grievance (Enter Subject Matter)</u>

The Grievance Management Committee (**mention level**) is writing to you regarding the grievance received on (**enter date**) with the issue/subject being (**summarize the grievance/complaint/concern**).

Grievance Management Committee will begin investigating this grievance and intend to revert back to you not later than 14 working days from the date of receipt of the complaint.

Grievance Management Committee (Grievance Coordinator) will serve as the point of contact for this case and will update you as necessary. In the meantime, please do not hesitate to contact him should you have any questions.

Kind Regards,

Signature:

Enter Name:

Grievance Coordinator

N/B

Medium of initial grievance response by Grievance Management Committee could be through (a) Email (b) Telephone (c) Face to Face (d) Letter (with the above content communicated).

In case the grievance is assessed to be out of the scope of the GRM, a communication towards the same shall be made to the grievant, and an alternative mode of redressal shall be suggested.

Table 9-2. Applicable Timeframes

Action	Timeframe
Register grievance in database	Within 2 working day
Acknowledge grievance	Within 2 working days
Issue grievance feedback explaining time required for resolution and on-going progress if not yet resolved	Within 14 working days
Issue grievance feedback when mitigation established within the assigned timeframes	14 days
Approve and issue/implement redress action as per the agreement and related conditions/options.	14 days after agreeing to resolution

9.1.6 GRM Monitoring and Implementation

It is important to monitor GRM to ensure that the grievances are addressed and resolved. The monitoring of the GRM implementation will be undertaken on a periodic basis by KfW. Monitoring aspects will be elaborated in the project wide Grievance Redress Mechanism (GRM) is being set up and will include among others the following indicators:

- Number of cases requesting external review or alternative third-party arbitration
- Number of stakeholders satisfied with solution
- Number and percentage of grievances received per categories
- Number and percentage of grievances received per severity level
- Number and percentage of grievances resolved versus rejected
- Number and percentage of grievances per operation site/location
- Type of grievances received according to the categories,
- Severity of grievance
- Qualitative indicators shall be reported monthly and include root cause analysis, specific case examples and lessons learned.
- Number of grievances received, logged, acknowledged, processed, resolved and closed within set time frame.

9.1.7 GRM Reporting

The performance of the GRM will be reviewed on a quarterly basis during the implementation period. For the purpose of review, the quarterly reports will be considered for analysis and discussion. On the basis of these reports, a Grievance Redressal Report will be prepared. Reports will be periodically shared on complaints and grievance logs with KfW for monitoring purposes.

ACTED will maintain a documented record of stakeholder engagement and GRM, including a description of the stakeholders consulted, a summary of the feedback/grievances received and a brief explanation of how the feedback was considered, or the reasons why the issue could not be resolved. For complaints related to GBV, reporting and response protocol including identification of SEA/H and GBV-sensitive channels to be integrated into the grievance mechanism, and requirements for enabling survivor-centered care.

10 IMPLEMENTATION BUDGET

This chapter describes the estimated cost, budget for the implementation of the ESMF and outlines the activities and summary of costs.

10.1 Estimated Budget

The estimated total cost for ESMF implementation is indicated in the **table 10-1** below.

Table 10-1. Overall Estimated Costs Budget For implementation of ESMF

Activity	Description	Unit cost, US\$
Training and awareness on the ESMF	Workshops	50,000.00
Recruitment of environmental and social specialists	Prepare ESIA/ESMP and RAPs for sub projects	300,000.00
Grievance Redress Management	Meetings and consultations etc	30,000.00

II ANNEX

II.1 Annex A. Screening Form

Format 1.0: SCREENING CHECKLIST (Filled and prepared by ACTED)

Project: Select relevant project

Project Investment name [type here]
 Location [type here]
 Estimated cost (USD) [type here]

TYPE OF PROJECT OR ACTIVITY

Sub Project Type

- Construction of bulking/produce warehouse facilities
- Construction of water boreholes
- Construction of markets centres
- Construction of IT centres

Please give more details: [type here]

For all projects, an Environmental and Social Management Plan (ESMP) will be required.

In addition, the following studies may be required:

Will this project affect vulnerable and marginalized groups? If yes, a Vulnerable and Marginalized Groups' Plan will be required	<input type="checkbox"/>	<input type="checkbox"/>
Will the project require land for its development, and therefore displace individuals, families or businesses from land that is currently occupied, or restrict people's access to crops, pasture, fisheries, or forests, even, whether on a permanent or temporary basis? If yes, a Resettlement Action Plan will be required	<input type="checkbox"/>	<input type="checkbox"/>
Will the Project:	Yes	No
Adversely affect natural habitats nearby, including forests, rivers, or wetlands?	<input type="checkbox"/>	<input type="checkbox"/>
Require large volumes of construction materials (e.g., gravel, stone, water, timber, firewood)?	<input type="checkbox"/>	<input type="checkbox"/>
Use water during or after construction, which will reduce the local availability of groundwater and surface water?	<input type="checkbox"/>	<input type="checkbox"/>
Affect the quantity or quality of surface waters (e.g., rivers, streams, wetlands), or groundwater (e.g., wells, reservoirs)?	<input type="checkbox"/>	<input type="checkbox"/>
Be located within or nearby environmentally sensitive areas (e.g., intact natural forests, mangroves, wetlands) or threatened species?	<input type="checkbox"/>	<input type="checkbox"/>
Lead to soil degradation, soil erosion in the area?	<input type="checkbox"/>	<input type="checkbox"/>
Create waste that could adversely affect local soils, vegetation, rivers and streams or groundwater	<input type="checkbox"/>	<input type="checkbox"/>
Create pools of water that provide breeding grounds for disease vectors (for example malaria or bilharzia)?	<input type="checkbox"/>	<input type="checkbox"/>
Involve significant excavations, demolition, and movement of earth, flooding, or other environmental changes?	<input type="checkbox"/>	<input type="checkbox"/>
Affect historically important or culturally important site nearby?	<input type="checkbox"/>	<input type="checkbox"/>
Require land for its development, and therefore displace individuals, families or businesses from land that is currently occupied, or restrict people's access to crops, pasture, fisheries, forests or cultural resources, whether on a permanent or temporary basis?	<input type="checkbox"/>	<input type="checkbox"/>
Result in human health or safety risks during construction or later?	<input type="checkbox"/>	<input type="checkbox"/>
Involve inward migration of people from outside the area for employment or other purposes?	<input type="checkbox"/>	<input type="checkbox"/>
Result in conflict or disputes among communities?	<input type="checkbox"/>	<input type="checkbox"/>
Affect indigenous people, or be located in an area occupied by indigenous people?	<input type="checkbox"/>	<input type="checkbox"/>
Be located in or near an area where there is an important historical, archaeological or cultural heritage site?	<input type="checkbox"/>	<input type="checkbox"/>

Result in a significant change/loss in livelihood of individuals?	<input type="checkbox"/>	<input type="checkbox"/>
Adversely affect the livelihoods and /or the rights of women?	<input type="checkbox"/>	<input type="checkbox"/>

If you have answered **Yes** to any of the above, please describe the measures that the project will take to avoid or mitigate environmental and social impacts

[type here]

What measures will the project take to ensure that it is technically and financially sustainable?

[type here]

If the answer to any of questions “Yes”, please use the indicated Annexes or sections(s) of the ESMF for guidance on how to avoid or minimize typical impacts and risks.

When considering the location of an investment, rate the sensitivity of the proposed site in the following table 10 according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They do indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate or manage potential effects.

Site Sensitivity Rating

Issues	Site Sensitivity			Rating (L, M,H)
	Low (L)	Medium (M)	High (H)	
Natural habitats	No natural habitats present of any kind	No critical natural habitats: other natural habitats occur	Critical natural habitats present	
Water quality and water resource availability and use	Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues	Medium intensity of water use; multiple water users; water quality issues are important	Intensive water use; multiple water users; potential for conflicts is high; water quality issues are important	
Natural hazards vulnerability, floods, soil stability/ erosion	Flat terrain; no potential stability/erosion problems; no known volcanic/seismic/ flood risks	Medium slopes; some erosion potential; medium risks from volcanic/seismic/ flood/ hurricanes	Mountainous terrain; steep slopes; unstable soils; high erosion potential; volcanic, seismic or flood risks	
Cultural property	No known or suspected cultural heritage sites	Suspected cultural heritage sites; known heritage sites in broader area of influence	Known heritage sites in project area	
Involuntary resettlement	Low population density; dispersed population; legal tenure is well-defined; well-defined rights	Medium population density; mixed ownership and land tenure; well-defined rights	High population density; major towns and villages; low-income families and/or illegal ownership of land; communal properties; unclear rights	
Indigenous peoples	No indigenous population	Dispersed and mixed indigenous populations; highly acculturated indigenous populations	Indigenous territories, reserves and/or lands; vulnerable indigenous populations	

CONCLUSION

Which course of action do you recommend?

ESIA RAP/RPF is the reference document with reference to resettlement issues

There are no environmental or social risks

[Type here]

If a RAP is required, will the project Displace or restrict access for less than 200 individuals, or if over 200, are losses for all individuals less than 10% of their assets?

If Yes, Prepare an abbreviated RAP

If No, Prepare a full RAP

Full details of resettlement requirements are provided in the accompanying Resettlement Policy Framework.

Completed by: [type here]

Name: [type here]

Position: [type here]

Date: [type here]

11.2 Appendix B – Grievance Lodgment Form

Name of Commenter/Aggrieved		Comment/Grievance Number	
Name of Organization (if applicable)			
Address and Position			
Telephone/Fax			
Email Address			
Method of Grievance Placement	Mail Email Phone Walk In (Face to Face)		
Most effective means to send a response	Mail	Email	Phone
Date and Time of Comment/Grievance	Date	Time	
Nature and location of Comment/Grievance	Please provide details of grievance.		
What outcome are you seeking?			
Additional Information			
Any Supporting Documents Attached	Yes	No	
Initial Response details			
Date of initial response:			
Resolved/Addressed by:			
Nature of Resolution:			
Date of Resolution:			

Claimant Signature (if applicable):Date:

ACTED Representative Signature:Date:

11.3 Appendix C – Grievance Register

Ref No.	Date	Name	Phone	Post	Email	Description of Grievance	Date of Grievance	One-time grievance	Happened more than once	Ongoing	Expected Resolution/ Redress	Action identified to resolve the grievance	Date taken	Taken by whom	Complainant satisfied	If no, why?

11.4 Annex D. Sample ESIA Terms of Reference

Background and Project Description

The Project proponent will prepare a detailed Project background and planned activities based on the respective Detailed Design of selected sanitation works prepared under the program

The Objectives of the ESIA

The main objective of the Environment and Social Management Plan (ESIA,) will be to identify and assess impacts resulting from the proposed Projects identified in the Feasibility and detailed design reports to the biophysical social and economic environment.

Scope of work ESIA Assessment:

The consultant will provide:

1. Non-technical Executive Summary: describing significant findings and key recommended actions. Describe project residual risks after implementation of the proposed mitigation measures.
2. Clear description of the proposed Sub Project. Include the following information as relevant: location; general layout; size, capacity, etc.; preconstruction activities; project / construction history, construction activities; schedule, staffing and support; facilities and services; operations; required off-site investments; life span. This section will cover institutional arrangements to describe responsibilities for environmental and social risk management for the project.
3. Description of the baseline conditions in the project area of influence to cover the physical location, environmental setting, social and economic issues. Describe valuable or vulnerable environmental, social, and cultural assets in the project area, which may be at risk. Specify through maps at appropriate scales, the boundaries of the study area for assessment as well as surrounding areas likely to be environmentally affected. Describe relevant trends within the project area for potential cumulative impacts. Include description of ESIA methodology used. In this chapter, provide the summary of review of review existing studies and available data. Also takes into account current and proposed development activities within the project area but not directly connected to the project. Data will be relevant to decisions about project location, design, operation, or mitigation measures. The section indicates the accuracy, reliability, and sources of the data.

A baseline description will cover the following topics:

- The bio-physical environment:
- Location of the project sites
- Geology
- Soils
- Topography
- Hydrology (surface water features and drainage)
- Climate: current climate situation and climate change projections for the area
- Fauna (including aquatic fauna) and flora
- Protected areas (e.g. wetlands, Forest Reserves)

- Existing physical structures and infrastructure
- The socio-economic environment:
- Population and settlement
- Land tenure (and zoning)
- Land and natural resources use
- Economic activities and sources of livelihood within the catchment area. (e.g., agriculture, goods and services, domestic property market)
- Available social infrastructure (schools, hospitals etc.)
- Cultural/historical/archaeological sites

Finally identify data gaps and areas not covered by appropriate studies, using good international practice World Bank as benchmarks. Propose actions to close such gaps, including costs and time estimates.

4. Description of the legal, policy and institutional framework within which the proposed Sub Projects will be implemented. This section shall include local, national, and international laws and standards applicable to the proposed project.
5. Detailed assessment of the anticipated impacts to the environment, social and economic aspects of the area covered by the project. Impacts will include analysis of safety, risks, health, sanitation, and waste management implications by the project. This chapter will indicate the scale of impacts, whether the identified impacts are irreversible or reversible, permanent, or temporary, direct or indirect, large scale or local to project site. Identify residual impacts of this project, which cannot be avoided or mitigated. Also, this chapter will address issues connected to climate change and climate variability, investigating matters such as methane gases emissions from the sewer works
6. Potential scenarios and their impact on operation will be outlined and considered. Whenever possible describe impacts quantitatively, in terms of environment costs and benefits and assign economic values where possible.

Specific attention will be given to: Impacts occurring during construction phase in respect of:

- Water resources pollution (ground and surface water)
- Building of the Project civil works (e.g., access roads, construction camps)
- Local eco-system (removal of vegetation / endangered species / bird life)
- Traffic safety (people/construction traffic on and off-site)
- Public health (construction workers/HIV/malaria/dust/noise and vibration/solid waste and sewage)
- Raw materials (source of materials/demand on local supply)
- Settlement (displacement of persons/communities) – with references to project RAP.
- Cultural/historical/archaeological sites
- Employment
- Local/national economy
- Capacity building

Impacts occurring during operational phase in respect of:

- Effluent quality, quantity and use of water, aquatic biota, and sedimentation impacts
 - Changes in micro-climate
 - Hydrologic and limnological effects.
 - Decomposition of organic matter (e.g., trees).
 - Flora and fauna (vegetation, wildlife), including invasive species
 - Settlement (migration of large number of people/unemployment)
 - Public health (HIV/water borne diseases, pests)
 - Land and natural resources use (loss of agricultural land/source of fuel, traditional medicines)
 - Landscape (effect on aesthetic quality of landscape / compatibility with surrounding area)
 - Community life (community relationships/recreation/security)
 - Requirements for capacity building
7. **Analysis of the project alternatives** and selection criteria in terms of siting, design, technology selection, construction techniques and phasing, degree of associated environmental and social impacts, and operating and maintenance procedures. This section will also address the assessments of Sub Projects safety based on the proposed design alternatives. Include in the analysis the sites for access roads, construction camps, quarry sites and other associated works. The comparative analysis will address (and quantify where possible): the environmental and social impacts; the feasibility of impact mitigation; capital and recurrent costs; the suitability of options under local conditions; related institutional, training and monitoring requirements. State the basis for selecting the proposed design, including the minimization of risk. To the extent possible, quantify the costs and benefits of each alternative, incorporating the estimated costs of any associated mitigating measures.
8. Description of proposed **impact mitigation** and/or corrective measures for each impact identified
9. An Environmental and Social Management Plan (ESMP) presenting the project activities, potential impacts, mitigation actions, timing, targets and responsibilities, associated costs and monitoring indicators.
10. **ESIA Implementation Budget:** provide a clear statement of financial responsibilities, identify summary of costs for implementation of the proposed mitigation measures; provide detailed estimated budgets for all phases of the project including planning, implementation, monitoring and evaluation, with contingencies.
11. A record of **public consultations** and other records that will indicate participation of interested and affected parties throughout the ESIA study process, including surveys used to seek views of affected stakeholders; date and location of consultation meetings; a list of attendees, their affiliation, contact addresses and a summary. This section needs to present an approach to ongoing stakeholder engagement. In addition, a grievance redress mechanism will be described in this section.